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The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCTION AND PIPE LINE DIVISIONS

THE WEEK'S NEWS INTERPRETED

SEP 4 1934

AUGUST 13, 1934
Volume 74 Number 9

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Contents » August 13, 1934

Volume 74 ◆ Number 9

THE CHANGING PANORAMA 5

NEWS OF THE WEEK:
New Taxes vs "Hot" Oil 7
Texas Strengthens Control 9
Oil Code Before Supreme Court 10

Personals 40
Production 35
Crude Prices 39
"Squeaks" 81

PRODUCTION ENGINEERING:
Recovery of Oil by Steam..... 17
Kettleman Hills Casing Program..... 25
Repressuring at Hackberry 30

NATURAL GAS ENGINEERING:
Texas Panhandle Gas Reserve 31

MARKETS AND STATISTICS:
Decline in California Exports..... 13
Bureau Reports Gasoline Stock Loss..... 38
East Texas Still Disturbing..... 35
Production Materially Above Allowable..... 36

FIELD REPORTS:
High Spots in Brief 49

Oklahoma 50
California 69
Kansas 53
Texas 54
Louisiana 61
Michigan 71
Arkansas 66
Southeast 66
Mountain 67
Wildcats 73

NEW EQUIPMENT FOR THE FIELD..... 79

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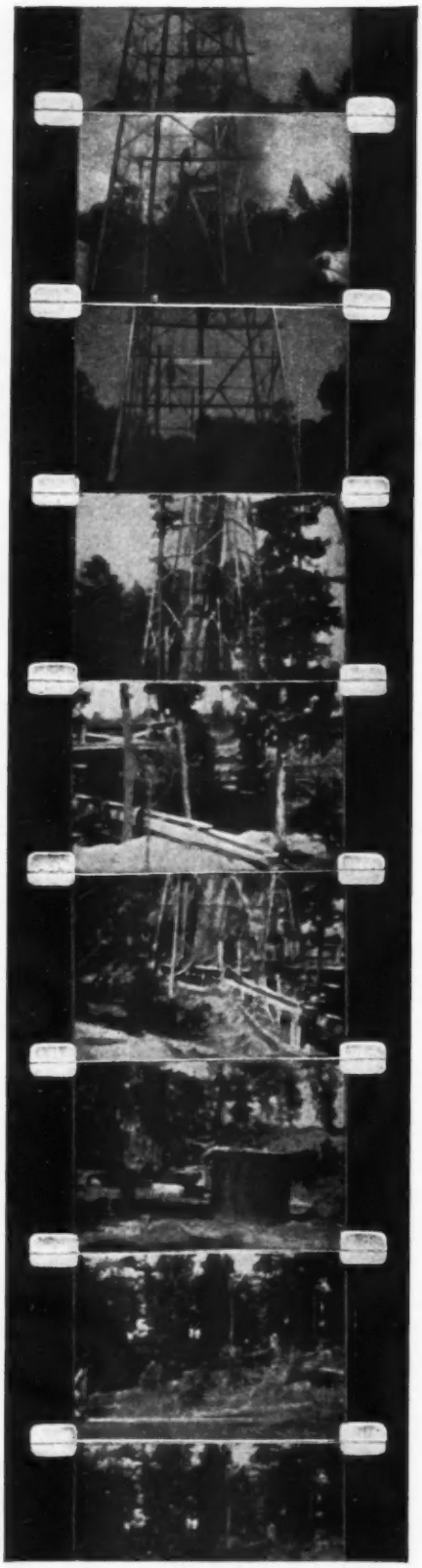

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VOLUME 73, No. 9 AUGUST 13, 1934

THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING • NEWS • STATISTICS

The Changing Panorama

With federal enforcement still handicapped in enforcing the oil code regulations due to court trials on which decisions have not been handed down, the burden of controlling the production of crude oil in East Texas rests largely on the shoulders of the Texas Railroad Commission. The latter organization now has full authority to enforce its orders, having been upheld in several courts. Commission members now have no excuse if they fail to perform their duty.

Last week they moved to strengthen their orders governing the movement of petroleum in East Texas. The new edict requires tenders on all tank car and pipe line shipments of crude tops, or any other name concocted for the various semi-refined products turned out, plus casinghead gasoline, distillates, etc. The action is retarding, at least temporarily, "hot" oil shipments by tankers. Railroad agents have instructions to notify the commission Kilgore office about loaded cars ready to depart, and the commission has approximately five hours to approve or turn down the shipment.

Apparently, the commission has abandoned all efforts to curb the flood of "hot" oil at the wells, and are depending on this new method of really making the railroads give a hand in checking illegally produced products.

This will cramp the style of "hot" oil merchants as long as it is enforced honestly. This is an important move, but means nothing unless the commission realizes its responsibilities. The industry will await with interest the outcome of these new efforts. Page 9.

Oklahoma City—An example of reckless drilling.

Greater Recovery Needed

It is well known that a large percentage of the oil contained in an oil bearing sand remains unrecovered with present methods, and one of the most important problems confronting the industry today is the discovery and perfection of means for bringing this unrecoverable quantity of oil to the surface. Engineers have given much thought to the problem and have been successful to a large degree, but are still far from achieving the degree of efficiency they desire and which should be possible.

Recently some interesting experiments have been conducted on a lease in Texas, in which a process for removing oil from depleted sands by means of dry steam was applied. Those connected with the project report favorable results. Of interest are the various experiments conducted and the outcome of each.

Page 17.

Demand Continues High

While the petroleum industry continues to have its difficulties in controlling its potentially large production, it at least has the advantage of demand that will not stay down.

Total demand for all oils in June, 1934, was 1.7 percent higher than in June, 1933. The total demand in the first six months of 1934 was 9.1 percent higher than in the opening half of 1933.

The outstanding feature of the general situation in the petroleum industry during 1934 has been the high consumption of gasoline. The Bureau of Mines report for June shows that gasoline consumption during that month continued at a high rate; with the result that gasoline stocks were reduced 3,000,000 barrels. Although direct comparisons are impossible it is thought demand in June was six to seven percent higher than one year ago.

Crude production was up and caused an increase in crude stocks, but this does not distract from the optimistic outlook brought about by retail buying.

The price index for petroleum products during the month remained practically the same as in May when it was estimated at 50.6, but, however, compares with 34.4 in June, 1933.

Page 38.

The Oil Man's Calendar

AUGUST

24-27 *Drake Well Memorial Celebration, Titusville, Pennsylvania.*

SEPTEMBER

10-14 *American Chemical Society, Cleveland, Ohio.*

19-21 *National Petroleum Association, Atlantic City, New Jersey.*

OCTOBER

1-5 *National Safety Council and American Society of Safety Engineers, Cleveland, Ohio.*

12-13 *A. I. M. E. Petroleum Division, Tulsa, Oklahoma.*

29 *American Gas Association, Atlantic City, New Jersey.*

NOVEMBER

12-15 *American Petroleum Institute, Dallas, Texas.*

American Association of Petroleum Geologists (Pacific Section), Los Angeles.

Gas Reserves

The Texas Panhandle is the world's outstanding gas reserve. Since 1918 a total of 3,914,911,641,000 cubic feet of gas have been produced, yet life of the field is expected to extend over another 15 or 20 years. The producing area embraces 1,300,000 acres, more than half of which has a tested open flow of 10,000,000 cubic feet per acre. During 1934 the total yield will be close to three quarters of a trillion cubic feet.

Such a tremendous fuel reserve is of vast importance to the industrial and domestic life of the United States. It should be preserved carefully, and yet it is estimated that 940,195,000 cubic feet of gas is being wasted in the area each 24 hours. Studies and experiments now being conducted may solve this problem. It is hoped so.

Statistics on the Texas Panhandle gas field are interesting and reveal the situation existing in this reserve.

Page 31.

New Regulations

It is simple for oil control authorities to issue orders and regulations, but when enforcement begins, the simplicity ends. There are usually many details to be handled, and facilities and workers are needed to handle them.

The oil administration's revised field regulations (THE OIL WEEKLY, July 30, 1934, page 15), designed to reduce "hot" oil volume, require additional and more detailed reports from the oil companies and operators, particularly in East Texas. The law abiding operators are taking steps to make the reports, furnish the lease plats, and comply with other new requirements.

The reports from the East Texas field, scene of a high proportion of the nation's "hot" oil, will be handled by the staff of the Department of Interior at Dallas. That staff as now organized appears to be entirely inadequate, however, to properly handle the mass of information that is demanded of the many operators involved. If any good is to come of the reports, an adequate organization must be assembled to do the filing and analysis work.

New Taxes *vs.* "Hot" Oil

Impending collections of new federal taxes on crude oil and gasoline promise to deter "hot" oil activities. Revised orders of Texas Railroad Commission also offer possibilities. Markets continue unsteady because of distress prices in East Texas.

JACK LOGAN
Associate Editor

LAST week brought no material change in the petroleum industry's outlook, although developments seemed to lean more toward the favorable than the unfavorable side. Markets continued fairly steady, under the bolstering influence of continued surplus gasoline buying in East Texas; and control efforts, sufficiently successful in past months to put the industry in good statistical condition, gave promise of becoming additionally effective in the immediate future.

Stricter Control Promised

The prospect of stricter control of oil operations involves plans of both federal and state governments. Possible strengthening of federal control lies in the belated inauguration of collections of the new one tenth cent per barrel taxes on crude oil at the well and gasoline at the refinery. Meanwhile better control of crude production in East Texas, the nation's outstanding "hot" oil district, is a possibility as result of a new order of the Texas Railroad Commission bringing under its supervision operators making or dealing in partially refined oil.

Tax Collections to Start

The ball has been started to rolling in connection with the tenth-cent taxes, as offices of the Internal Revenue Department finally have received necessary forms to be used by producers, purchasers, and refiners or processors of crude oil and by natural gas producers in filing monthly returns. The forms have just been made available, although the taxes became effective June 9. Those subject to paying the taxes must put up bonds to guarantee payments. The forms for producers' and purchasers' bonds have also been made available lately, while those for refiners previously were ready.

The taxes have been generally looked upon as the most effective weapon yet devised for stamping out "hot" oil producing and refining. But since the forms for filing the monthly tax returns have been released some doubt has been raised as to the value the taxes will have. The forms are extremely simple, showing only number of barrels produced, purchased, or refined during the month, and the amount of the tax, to be sworn to by the tax payer. In themselves the forms will furnish no proof that "hot" oil has been handled if an operator has set out to violate the oil laws.

Penalties for False Returns

The tax reports are expected by the authorities to prove valuable, however, not so much through information they will reveal as through their likelihood of detering violations. The returns may not show that "hot" oil has been handled. But they will bring every oil operator, including the erstwhile "hot" oil merchant, face to face with Uncle Sam once a month, in a solemn ceremony in which the operator swears in the shadow of prison bars that he is making a true and accurate report, backed up by detailed records and accounts that must be kept open to all federal and state oil control agencies for four years.

The tax return form contains the warning that severe penalties are imposed by law for false or fraudulent returns and also for failure to pay tax, keep records, or file returns. There is no direct mention of the new criminal code, but that measure provides that fines up to $10,000 and imprisonment up to 10 years may be assessed as penalties for making false statements with respect to any matter falling under the jurisdiction of any governmental agency. Considering the severe penalties involved and the four-year chance for detection, any operator contemplating "hot" oil transactions, evasive book-keeping, and crooked tax returns would naturally deliberate long

and seriously, it would seem, before becoming involved.

Means for Checking Tax Returns

Fraudulence in connection with payment of the new taxes will be complicated not only by the detailed records that must be kept for four years but also by reports and records now required under the oil code through revised regulations of Oil Administor Harold L. Ickes. Reclamation plants as well as producers, refiners, shippers, and carriers are required under the revised regulations to make detailed reports on all oil they handle, showing minute facts concerning the origin and history of the oil. Examination of books and inspection of properties by Interior Department agents are authorized. The regulations were promulgated in a new form July 23.

The validity of the oil code and the oil administrator's regulations are still in doubt, of course, with two test cases pending in the United States Supreme Court, and with the oil administration's agents still enjoined by federal district court from going upon properties of East Texas operators involved in the cases. Thus the oil administration is still handicapped as regards actually enforcing the code regulations, and will continue so until the supreme court disposes of the cases.

State Officers Have Free Hands

While the oil administration's powers through the code and the regulations remain questionable and therefore lacking in effectiveness, however, there is an ace in the hole that can perhaps be used to advantage in connection with the new federal taxes. It is the unshaken state control of oil in Texas in so far as court attacks are concerned. Texas oil laws have been repeatedly upheld in the courts, including the new refinery control law. And Texas Railroad Commission's orders prorating East Texas have been upheld in federal court.

Texas oil control authorities have free hands therefore in their enforcement efforts. They are free to inspect the books and the properties of producers, pipe line companies, and refiners in East Texas. They are free to check their records and findings and the records of the operators against the federal tax returns and the more detailed reports to be kept open for four years by the operators in connection with the taxes. The state authorities thus have practically everything needed for detecting "hot" oil producing and refining, and it is obvious that their efforts, coordinated with the activities of the federal revenue agents, could prove a devastating combination against "hot" oil.

Texas Regulations Stricter

Despite its now unquestionable powers, the Texas Railroad Commission has, of course, failed to keep "hot" oil from being produced in substantial volumes. There have been various reasons. Last week the commission took action calculated to contribute materially to better enforcement. Striking at illegally produced oil that has been offered for movement under classifications not included in previous orders, the commission has extended the scope of its East Texas regulations to apply to "refined crude tops, crude tops, topped crude, processed crude petroleum, treated crude oil, residue from crude petroleum cracking stock, uncracked fuel oil, fuel oil, residuum gas oil, casing head oil, naphtha, and distillate." Each transporter and receiver of oil is required to obtain from the person offering it for movement an affidavit showing that the crude oil involved was legally produced. Although the revised order was designed to reduce violations, its net results, in the opinion of some skeptics, may be, however, only the invention of some new names for "hot" oil.

Gasoline Market Unsteady

Uninterrupted buying of East Texas surplus gasoline by major companies continued to bolster the markets last week, but the undertone remained weak, with considerable quantities of East Texas material still offered at distress prices.

Refinery prices in the Mid-Continent sagged somewhat, in fact, although through inauguration of new octane classifications by the Mid-Continent refiners rather than through reduced quotations. The new classifications now used in quoting tank car gasoline have raised the octane ratings for all three grades of gasoline, and last week the prices quoted under the new groupings were the same as those which had been ruling under the old classifications.

The principal reason for revising the groupings, it was said, was that increasing volumes of gasoline with octane ratings as high as 68 to 70 had been selling as so-called middle grade.

Under the new schedule, third-grade gasoline embraces 62 octane and below, whereas it formerly included only 59 and below. Middle grade now embraces 63 to 70 octane, compared with 60 to 64 formerly. Premium grade is now 71 octane and above, as against 65 and above previously.

Group Three prices after inauguration of the new schedule last week were averaging around 4 cents a gallon for third grade, 4⅝ cents for middle grade, and 4⅞ cents for premium grade. Quotations at East Texas refineries appeared in the meantime to be averaging around 3⅝ cents, 4¼ cents, and 4½ cents. While major companies were paying 3⅞ cents a gallon for third grade under the East Texas purchase agreements, considerable material was available in the district for as little as 3¼ cents, although the minimum prices applied mostly at refineries not participating in the market stabilization plan.

Movement of "Hot" Oil Is Retarded By Shipment Curb

Tyler, Texas.—A curb on tank car shipments of topped crude and semi-refined crude of various forms leaving the East Texas refineries and topping plants placed into effect by the Texas Railroad Commission last week is proving to be the most effective weapon brought into play in recent months towards hindering the activities of producers and marketers of illegal production. Carriers are forbidden under the new rule to transport products lacking the approval of the commission's proration enforcement officers, who are demanding affidavits from shippers that the products are derived from legally produced crude. The special order also applies to pipe lines, thereby limiting movement from the field to tank truck hauls, if effectively enforced.

The commission adopted this new method of checking the flood of illegal production originating in the field after failing to gain the support of the attorney general's department in prosecuting violators.

The dormant federal ban on interstate shipments of petroleum products derived from illegally produced crude was also revived in this new drive against excess production. Supplemental orders were issued August 10 by railroads to their respective agents requiring that products consigned for interstate movement must be in accordance with the rules of the Department of Interior. The orders of the Texas Railroad Commission specifically stated that its regulations apply to intrastate movement, while the volume of semi-refined products moving to the coast for plants along the Gulf and Atlantic seaboard are amply covered by the Oil Code Administration's regulations. Arrangements were made by the commission to provide blanket tenders to plants operating on legally produced crude. Thereby lessening the task of checking all plants simultaneously. However, congestion of loaded tank cars at plant racks was in evidence late Friday, and it is quite probable that a court fight will be launched by the group that are unable to procure clearance papers. A time limit of five hours is reported to have been agreed upon between the commission and carriers for the former to act on applications for tender approvals, else the railroads will be allowed to accept the consignments for shipment.

Railroads have in recent months cooperated with the commission in refusing to handle illegally produced crude, but no interference was given shippers of crude mixed with fuel oil, or semi-refined products. This condition resulted in nearly all "hot" oil, except that smuggled from the field or authorized through false affidavits for movement via pipe lines, being camouflaged before being loaded out.

The new order was prepared through the joint efforts of Commissioner E. O. Thompson and Capt. E. N. Stanley, chief of the proration staff. It covers the following products: refined crude tops, crude tops, topped crude, processed crude petroleum, treated crude oil, residue from crude petroleum, cracking stock, uncracked fuel oil, fuel oil, residue gas oil, casinghead, naphtha and distillate.

Gasoline and kerosene were omitted from the list of products that must have an approved tender before car-

(*Continued on page 53*)

Commission Strengthens Its Oil Control in East Texas

Austin, Texas.—In an effort to check more accurately the movement of crude oil from the East Texas field, the Texas Railroad Commission has revised its rules to require tenders on all types of processed crude with the exception of gasoline and kerosene. The new order was issued on August 4, but is retroactive to July 24, the day the order was drawn.

Rules 10 and 11 of the special rules governing the East Texas field were affected by the change.

In the body of the order the commission explained that "It appearing . . . that various and sundry persons operating in said (East Texas) field are violating the rules and regulations of the commission by transporting crude oil from said field under the guise of crude oil products without making reports, keeping proper records, securing tenders and measuring crude oil before the same is so transported and processed, and without paying the taxes thereon as required by law . . . 'crude oil products' shall mean and include refined crude tops, crude tops, topped crude, processed crude petroleum, treated crude oil, residue from crude petroleum cracking stock, uncracked fuel oil, fuel oil, residium gas oil, casinghead, naphtha and distillate . . . "

In order to check the movement of these classes of oil the commission has required that "every person, common carrier and other transporter of crude petroleum purchasing, receiving, storing, transporting and delivering crude oil and doing business in or moving oil from the East Texas oil field . . . shall on or before the 20th day of each calendar month file with the Railroad Commission of Texas, at Kilgore, Texas, a statement duly verified, containing . . . the following information concerning its business in said field during the preceding calendar month."

Included in the requirements for this report are: Barrels of crude on hand at the beginning and end of each calendar month, together with the exact location of tanks in which such crude is stored; barrels of crude received during the month, place of origin and name of the owner from whom it was received; oil moved during the month, together with the point of origin and place of delivery.

An additional report is required daily from each person handling crude oil or its products. This report also contains considerable detailed information, as set out below.

Barrels on hand at the beginning and end of each day and the name and address of the owner of such oil; barrels of oil received each day, including the name and address of the previous owner and the origin of the oil, the same information concerning the person from whom the oil was received, meth-

od of transportation used in delivery, the name and location of each lease from which oil was received and the amount of oil received from each lease. Similar information is also required concerning any oil delivered by the transporter and the person to whom it was delivered.

A complete report is also required on all crude and processed oil tendered. Descriptions of the leases involved, the amount of oil produced on each lease, the days upon which it was produced, as well as detailed information relating to the disposition of the oil must be shown. This report must also include information concerning the plant at which any oil was processed, and in each instance a statement must be made showing that the oil was legally produced.

No oil of any sort, save gasoline and kerosene may be transported without a duly certified tender, nor may any operator have in his possession such processed oil without an approved tender.

Members of the commission expressed the opinion that this order would serve to stop one of the most persistent leaks through which "hot" oil has been taken from East Texas.

Oil Code Case Appeal Is Filed in Supreme Court

Washington, D. C.—Contending that the delegation of legislative authority to President Franklin D. Roosevelt by the Industrial Recovery Act is unconstitutional and that Oil Administrator Harold L. Ickes is without power to establish quotas for the producing areas, Amazon Petroleum Corporation on August 6 filed with the United States Supreme Court its appeal from the New Orleans Circuit Court of Appeals.

This was the third petition for review to be filed with the court by members of the oil industry, appeals from the Panama Refining Company and East Texas producers having been filed some time ago.

Asserting that the oil administrator is without constitutional power to regulate their business because it is not of an interstate commerce character, Amazon Petroleum Company in effect laid down a broad challenge of the entire recovery act, and contended that the government was using as a pretext to curtail oil production and raise prices its powers of regulation of interstate commerce.

Presentation of the petition to the United States Supreme Court brings up for final decision, probably next fall, the issue first brought before the courts when the East Texas group sought to prevent the Texas Railroad Commission from enforcing proration orders and the federal officials from carrying out the regulations of the oil administrator.

The three-judge court before which the case was first argued, dismissed the action against the Texas Railroad Commission, but on appeal to the Federal District Court the federal officials were enjoined from the enforcement of the administrator's regulations.

Later the Fifth Circuit Court of Appeals sustained the contentions of the government, reversed the decision of the district court and upheld the validity of the recovery act.

It was because of the decisions of the lower courts that Oil Administrator Harold L. Ickes sought the passage last session of the oil control bill which would strengthen his powers over the industry by regulating the shipment of oil in interstate commerce and, failing success in congress, later sought to have the oil code amended to practically the same effect. The proposed amendments are still awaiting his final action.

Pipe Line Hearing Is Recessed Again

Austin, Texas.—Absence from Austin of two members of the Texas Railroad Commission last Tuesday, August 7, caused another recess in the hearing to determine means and methods of reporting that are to be required of Texas pipe line companies. The reports in question are to form the basis of a series of rates for the various pipe line systems operating in the State.

Commissioner C. V. Terrell declared that the subject was of such importance that at least two members of the commission should be present at the hearing. August 22 was the date chosen for the next hearing. This date was selected in order to permit operators present at the production hearing to attend both meetings.

The commission has ordered pipe line companies to file detailed inventories of all their properties in Texas, together with maps of all lines, pumping stations, and other equipment properly chargeable to pipe line operations. This data is to form the basis for the commission to use in determining fair and reasonable rates to be charged for transporting crude by pipe line in Texas.

The hearing was first scheduled for the early part of July, but was recessed to permit pipe line company officials time in which to make a thorough study of the inventory reports proposed.

Meanwhile the lines have come forward with a proposal that all rates be reduced by one third. The commission however, has declined to accept this offer until they have made an investigation that will show what rates should be established.

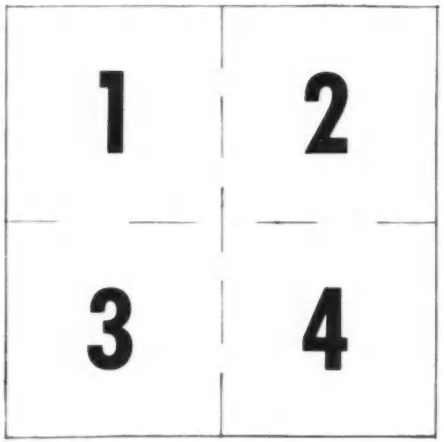
Investigating Committee Due to Arrive in Kansas

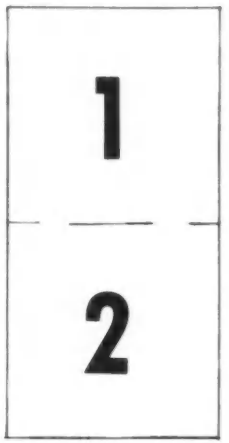
Wichita, Kansas.—The Congressional Investigating Committee is expected to arrive here on Monday, August 13, for an inspection and investigation of Kansas fields, according to announcement of Tom C. Johnson, chairman of the Kansas Production Committee, Regional District No. 4. The committee, headed by Representative Cole of Maryland, already has visited oil centers of the eastern states and of Oklahoma and Texas, and the visit to Kansas is a continuation of the investigation commenced several weeks ago. A representative group of Kansas oil operators met with Johnson to formulate plans for entertaining the visiting Congressmen. The party will include the following members of the committee: Pettingill and Mapes of Michigan; Kelly, Illinois; and Wolverton, New Jersey. The group will go from Wichita to Denver, Colorado, where they are due August 20.

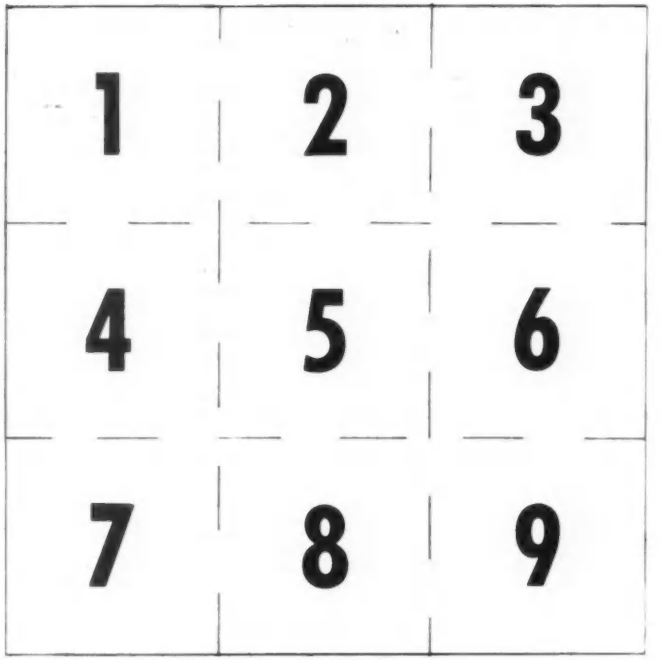
Oklahoma Companies Are Consolidated

Tulsa.—Effective August 1, Altitude Petroleum Corporation and Bell Oil & Gas Company were merged as Bell Oil & Gas Company, according to announcement by Albert Finston, vice president and manager of the latter company and I. A. Anson, vice president of the former. By terms of the merger Albert Finston continues as vice president and general manager. M. L. Freese and I. A. Anson of Altitude Petroleum Corporation become vice president in charge of sales and marketing. The new company now has refineries at Grandfield, Oklahoma; Chanute, Kansas, and Kansas City, Mo., and production in North Texas and the Texas Panhandle. Sales offices will be maintained at Chicago, Kansas City, Minneapolis and Milwaukee. Main offices will be in the Phil-tower Building, Tulsa.

Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.





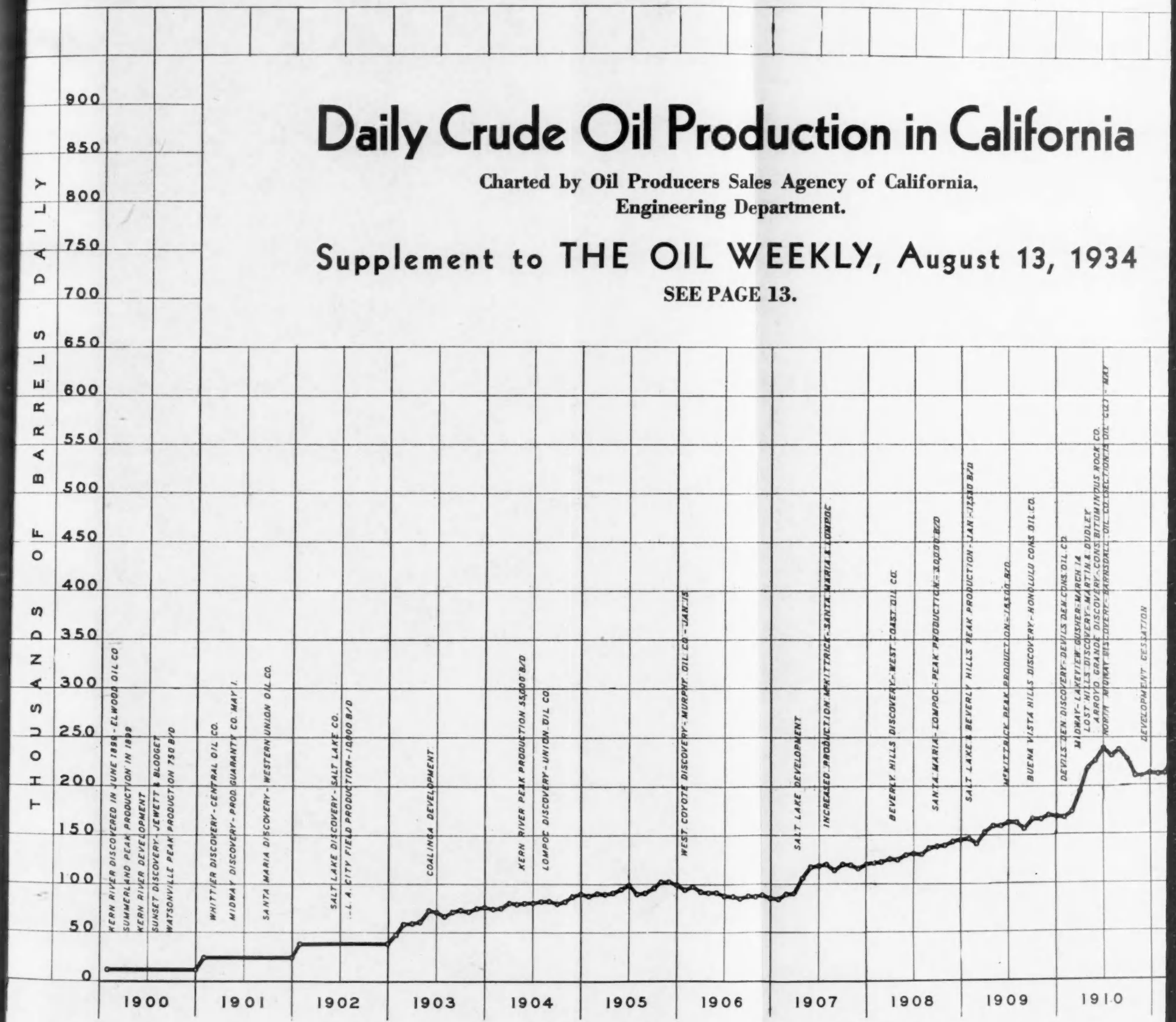


Daily Crude Oil Production in California

Charted by Oil Producers Sales Agency of California,
Engineering Department.

Supplement to THE OIL WEEKLY, August 13, 1934

SEE PAGE 13.



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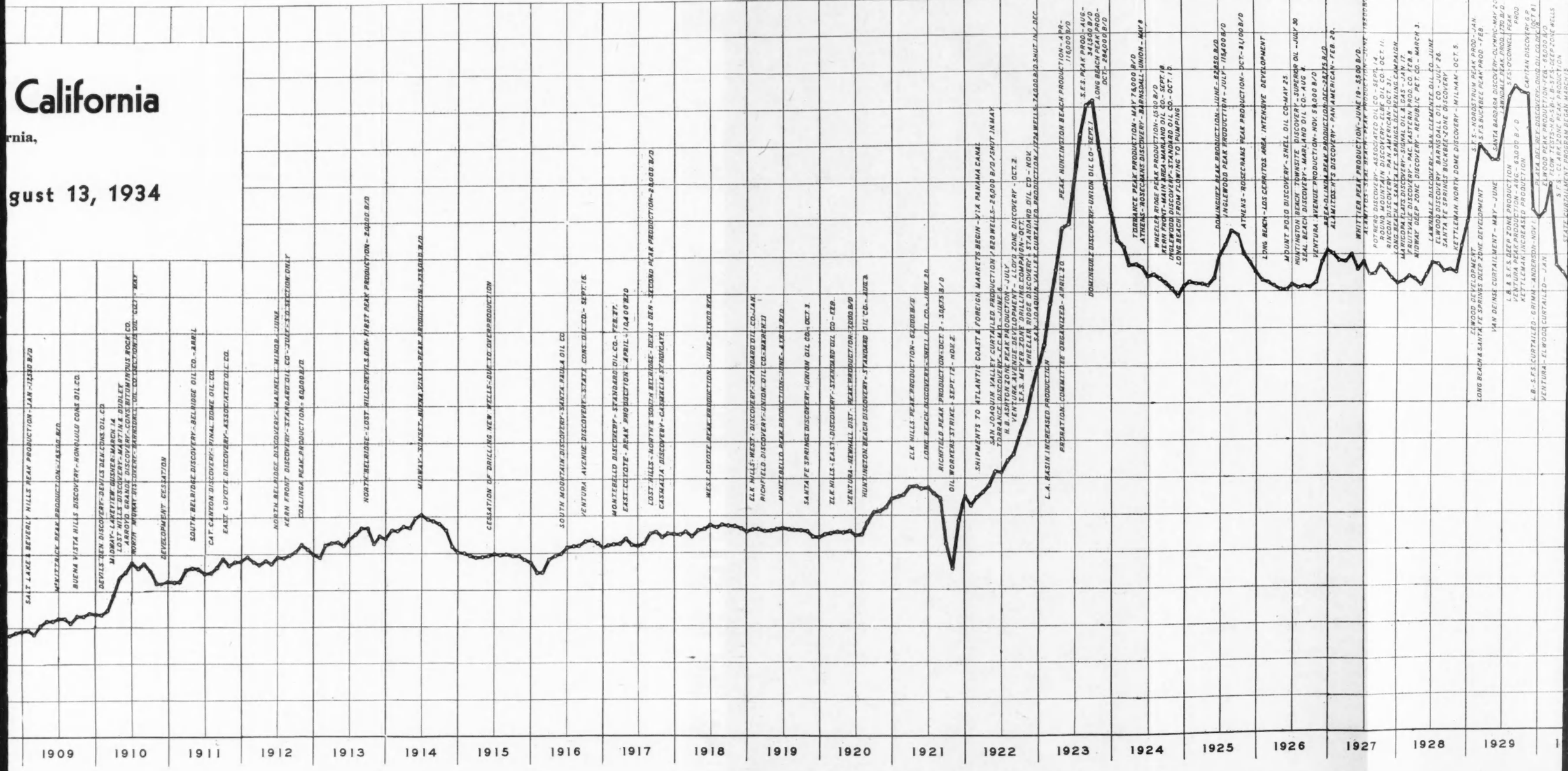

POTRERO DISCOVERY - ASSOCIATED OIL CO - SEPT. 14
ROUND MOUNTAIN DISCOVERY - ELBE OIL CO. - OCT. 11.
RINCON DISCOVERY - PAN AMERICAN - OCT. 31.
LONG BEACH & SANTA FE SPRINGS DEEPENING CAMPAIGN
MARICOPA FLATS DISCOVERY - SIGNAL OIL & GAS - JAN. 17.
FRUITVALE DISCOVERY - PAC. EASTERN PROD. CO. FEB. 8
MIDWAY DEEP ZONE DISCOVERY - REPUBLIC PET. CO - MARCH 3.
LAWNDALE DISCOVERY - SAN CLEMENTE OIL CO. JUNE
ELWOOD DISCOVERY BARNSDALL OIL CO - JULY 26.
SANTA FE SPRINGS BUCKBEE ZONE DISCOVERY
KETTLEMAN NORTH DOME DISCOVERY - WILHAM - OCT. 5.
ELWOOD DEVELOPMENT
LONG BEACH & SANTA FE SPRINGS DEEP ZONE DEVELOPMENT
S.F.S. - NORDSTRUM PEAK PROD - JAN
S.F.S. BUCKBEE PEAK PROD. - FEB.
VAN DEINSE CURTAILMENT - MAY - JUNE
SANTA BARBARA DISCOVERY - OLYMPIC - MAY 20
LAWNDALE PEAK PROD. 1730 B/D.
S.F.S. - O'CONNELL PEAK PROD
L.A. & S.F.S. DEEP ZONE PRODUCTION
VENTURA PEAK PRODUCTION - AUG. - 63,000 B/D
KETTLEMAN INCREASED PRODUCTION
CAPITAN DISCOVERY G.P.
L.B. - S.F.S. CURTAILED - GRIMM - ANDERSON - NOV. 1.
PLAYA DEL REY - DISCOVERY - OHIO OIL CO. OCT. 8 - (OCT 81)
VENTURA - ELWOOD CURTAILED - JAN
ELWOOD PEAK PRODUCTION - FEB. - 66,000 B/D
FLOW TESTS - N.B. - S.B. - L.B. - S.F.S. - DEEP ZONE WELLS
S.F.S. - CLARK ZONE PEAK PRODUCTION
STATE CURTAILMENT PROGRAM BEGAN MARCH 18
POTRERO PEAK PRODUCTION - JUNE 5,200 B/D
SAN MIGUELITO DISCOVERY - C.C.M.O. - SEPT. 4
NORTH BELRIDGE TEMBLOR ZONE DISCOVERY OCT. 7 - BELRIDGE OIL CO.
KETTLEMAN LOWER SAND DISCOVERY NOV.
PLAYA DEL REY - PEAK PRODUCTION - DEC. 9 - 48,000 B/D
GATO RIDGE DISCOVERY - BARNSDALL OIL CO. - JUNE 28.
NORTH BELRIDGE DEEP ZONE DISCOVERY - BELRIDGE OIL CO - JUNE 16.
NEAL ANDERSON ELECTED STATE OIL UMPIRE - AUGUST
ELWOOD - SESPE ZONE DISCOVERY - OCT 17 - SHUT IN OCT 25 + - BARNSDALL OIL CO
SAN MIGUELITO DEVELOPMENT BY CONTINENTAL - NOV 16
KETTLEMAN - MIDDLE DOME DISCOVERY - PET SEC. - DEC. 13
DOMINGUEZ DEEP ZONE DEVELOPMENT
J. R. PEMBERTON ELECTED STATE OIL UMPIRE - JULY 13.
FLOW TESTS - S.F.S. & PLAYA DEL REY - OCT.
EARTHQUAKE - L.A. BASIN - MARCH 10.
MOUNTAIN VIEW DISCOVERY - HOGAN PET. CO - MAY 13
MONTEBELLO - MIOCENE ZONE DISCOVERY - UNIVERSAL CONS. OIL CO - AUG. 16.
N.I.R.A. PETROLEUM CODE EFFECTIVE SEPT. 6
HUNTINGTON BEACH - PEAK SHORE LINE DEVELOPMENT - OCT.
1927
1928
1929
1930
1931
1932
1933
1934
1935
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100
150
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THOUSANDS OF BARRELS DAILY
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BAKER Cable Tool CORES
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BE SURE IT'S MARKED "BAKER" BECAUSE ONLY THE BAKER CABLE TOOL CORE BARREL HAS ALL THE FEATURES REQUIRED FOR SUCCESS

HOLES FOR ENTRY OF FLUID INTO VALVE CHAMBER WHEN VALVE IS OPEN ON UP-STROKE

THIS BACK-PRESSURE VALVE CLOSES TO PRODUCE HYDRAULIC ACTION ON THE DOWN-STROKE.

THREADED JOINT FOR REMOVING DRILL BARREL

DRILL BARREL IS MADE OF SEAMLESS STEEL

DRILLING WATER PASSES OUT THROUGH HOLES WHEN THE BALL VALVE CLOSES ON DOWN-STROKE.

WATER FORCED DOWNWARD BETWEEN INNER AND OUTER BARRELS CLEANS TEETH AND FORMATION

JOINT FOR REMOVING DRILL BARREL SHOE

TEETH ARE STAGGERED TO PREVENT KEY-SEATING.

CORE RETAINING TUBE OF SEAMLESS STEEL

BY UNSCREWING THE HEAD OF THE CORE-RETAINING TUBE, AND THE TRIMMER SHOE, THE CORE CAN EASILY BE EXTRACTED FOR COMPLETE EXAMINATION

THE HIGH PERCENTAGE OF PERFECT CORES RECOVERED HAS BEEN LARGELY RESPONSIBLE FOR ITS SELECTION BY MAJOR OPERATORS EVERYWHERE.

SPLIT, TAPERED TRAP RING HOLDS CORE SAFELY.

HARD-FACED TRIMMER SHOE PARES THE CORE BEFORE IT ENTERS TUBE, AND IS EASILY REPLACEABLE

CORE-RETAINING TUBE RESTS ON BOTTOM TO INSURE TAKING A COMPLETE SAMPLE OF FORMATION

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Baker Cable Tool Core Barrel

AND in wildcat wells this remarkable core barrel is as essential as a drilling bit.

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- Test accurately for porosity
- Select proper casing locations
- Determine where to make a water shut-off
- Find breaks in sands which may separate oil from water-bearing horizons
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- Determine whether sands are water-bearing, oil-bearing, or dry
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Decline of Oil Exports *Changes California's* Marketing Conditions

Lower crude production in state, increased development elsewhere and tariff barriers are responsible for transition

BRAD MILLS
Associate Editor

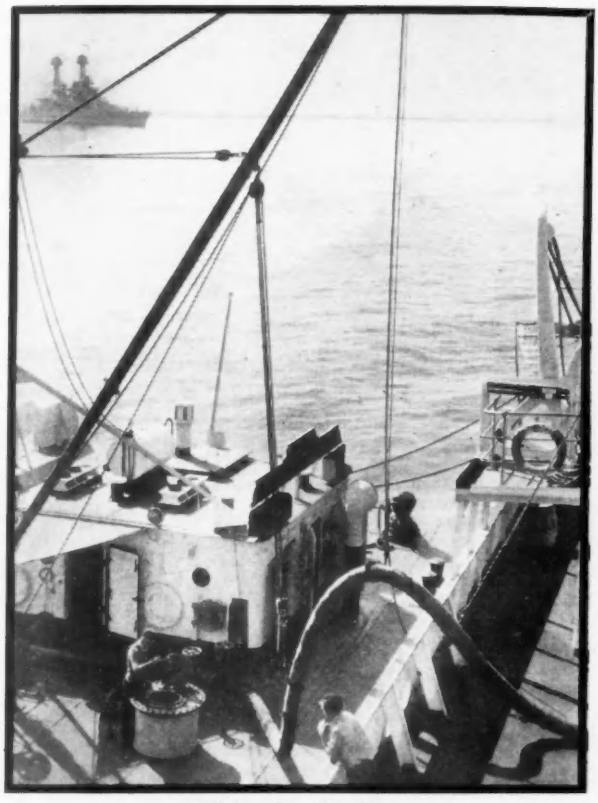
CALIFORNIA'S position as a world petroleum factor has been shifting for several years. Aggressor in many trade fights and defendant in others, the West Coast state must find consolation in a steady local consumption, and must be satisfied with a smaller export trade volume than it enjoyed five years ago.

Numerous factors have been responsible for the transition. Increased development in other districts, tariff barriers, local squabbles, and the world depression have played prominent roles in forcing a lower demand.

A leading California marketing organization has resigned itself to the belief that ultimately various trade territories will be supplied with petroleum products produced nearest to those districts. There seems to be no logical reason why California should supply the bulk of petroleum to an area 10,000 miles distant, when a producing district 2000 miles away has a surplus that might be used, unless the California surplus is much greater and far cheaper.

Five years ago California was marketing its petroleum in many marginal districts. There was some question at the time of the economic wisdom of such expansion. But the oil was available, and the demand could be satisfied at the expense of other producing districts with smaller surpluses.

As other producing districts, including the Mid-Continent, South America and Russia, have pushed development, they have also introduced more aggressive market plans. All these producing districts have at one time or another resented California's distribution, or "intrusion," in territories that might not logically be supplied by California. Increased production since 1929 in a few Texas and foreign fields, plus natural trade barriers, have helped to isolate California in many instances. This isolation has been reflected in a much lower export total.



Oil Tanker Loading
—Courtesy, The B. F. Goodrich Rubber Company

In the final analysis of the situation, shipment of California gasoline and fuel oil to New York City and Portland, Maine, is as much an economic mistake as shipment of Gulf Coast gasoline and fuel oil to Portland, Oregon, and Seattle, Washington. Each trade territory should logically be supplied by its closest producing district, unless the more remote producing center develops an oversupply that must be dumped at any cost.

Semi-dumping has played an important role in California's distribution of petroleum products. To meet competition from other producing districts, it has had to ship products twice as far. This policy involves such factors as overproduction, and the shipments may be condemned when it is recalled that the products had to be moved because of insufficient storage, and to prevent physical waste.

California has not been the first nor the worst offender in shipment of petroleum products to other trade territories, but other major producing areas have gradually taken markets not logically and economically California's.

During 1928, 1929 and 1930, California was able to export a large percentage of

its petroleum production far out of line with normal requirements. This overproduction and slow development in other producing districts caused exports to soar. Deep development at Santa Fe Springs and Long Beach created a surplus that had to be moved or stored at any cost. This surplus was both moved and stored.

Now California finds itself stripped of many of its old markets. This condition has grown gradually but surely. It is not any secret that the bulk of the Atlantic foreign, a portion of the Atlantic seaboard, good part of the Orient, and the cream of the Australian markets have been lost.

Reasons for this great trade loss are many and complicated. Distance has proved a greater barrier than it once was, with development of supplies elsewhere. An almost vicious competitive policy has been pursued by Russia for several years. This very aggressive Russian program has made shipment of petroleum to parts of the Orient and Australia unprofitable for California exporters.

The present California crude supply will not permit such competitive world distribution as was practiced during overproduction periods. Other districts have during the past few years passed through heavy development stages, and they are in a position to dominate adjacent trade territories. Such a domination is fair and logical, but it has been done in a few instances at the expense of California, which now finds itself of second and third rank in several territories.

The East Texas field has been a strong factor in causing California to lose a portion of its export business. The flow of this oil to Gulf Coast terminals has made possible shipment to several marginal territories partially supplied at one time by California. This is true particularly of crude oil and gasoline. The East Texas field was developed during the period California found most trying. Its hands were full in trying to meet other competition, and East Texas was able to throw enough surplus oil around the edges to make matters much worse.

THE question of whether California or the Gulf Coast should supply certain districts has for several years been an important one. South America was until two years ago mixed in the same question. The Atlantic seaboard was anybody's territory. The Gulf Coast should have normally supplied this vast Eastern market, but it could not release enough oil to compete with California. Cost of getting North Texas and upper Mid-Continent products to tidewater was also a barrier.

East Texas and Conroe were not to be denied, and their influence has reduced the demand for certain California products by a wide margin. The Gulf Coast is definitely a competitor California must face in the future. The haul is much shorter from Houston than from Los Angeles to many trade territories formerly supplied in a large measure by the latter.

From a purely domestic standpoint, California and the Gulf Coast should and will largely supply their logical territories. They are, however, competing in world markets and should be classed as ordinary competitors.

RUSSIA is a greater factor in the Orient, in Europe, and in Australia than might be suspected. This country has been pushing its shipments of crude oil, gasoline and kerosene to most of the markets formerly favored by California. The result has been the outright loss of many small districts, and partial loss of other larger ones.

Out of fairness to Russia, it should be stated that much of the trade territory gained logically belongs to her. Some of it does not, and in gaining this territory prolonged and drastic price wars have been conducted. Russia has not caused all these price wars, but her entry was a contributing factor.

California has best held its Pacific foreign trade. This territory logically belongs to it. Russia has been cutting in considerably, and has been a disturbing factor if not a real threat in many districts. Australia is easier reached by boat from Los Angeles than from points in South Russia, but it has become a common fighting ground for both.

LOSS of Atlantic foreign trade has been a severe blow to California. Other districts have for two years been able to supply most of this requirement. Shipment through the Panama Canal to the more distant European points was possible during periods of overproduction, before development of other producing areas, and prior to the tariff barriers. South American fields are supplying a large part of this loss.

Loss of the Chilean and western South American market reduced the exports of California gasoline and fuel oil by a good percentage. Oil fields of northern South America are now supplying most of these requirements. This market, though modest, was one of the most desirable open to California. It was accessible, and price troubles common to many districts were rare.

HEAVY movement of fuel oil from California to the Atlantic seaboard is affecting and will affect California's position as a world factor. This movement will benefit ultimately the California oil producer, but it is removing the surplus with which the state might compete in foreign markets, a leading agency thinks. Reduction of heavy oil stocks should do more good than harm, since it will be possible to produce additional heavy oil on short notice for foreign shipment, should the demand develop. Shipment of a large quantity of fuel oil to Atlantic seaboard points may also set a precedent leading to even greater future shipments.

Overproduction and storage of

crude oil has largely governed California's ability to meet competition in foreign markets. The supply has greatly exceeded local demands for many years. The surplus has been available for the best price it would bring, or for storage.

An average daily production in 1929 of 800,000 barrels permitted liberal export privileges. So much oil could not be used locally, and it was unsound economically to store all the surplus. Even during 1929, a good year for exports, California stocks increased from 140,000,000 barrels to 184,000,000 barrels. The industry has never recovered from the effects of this increase. A close connection has always existed between overproduction and exports in California.

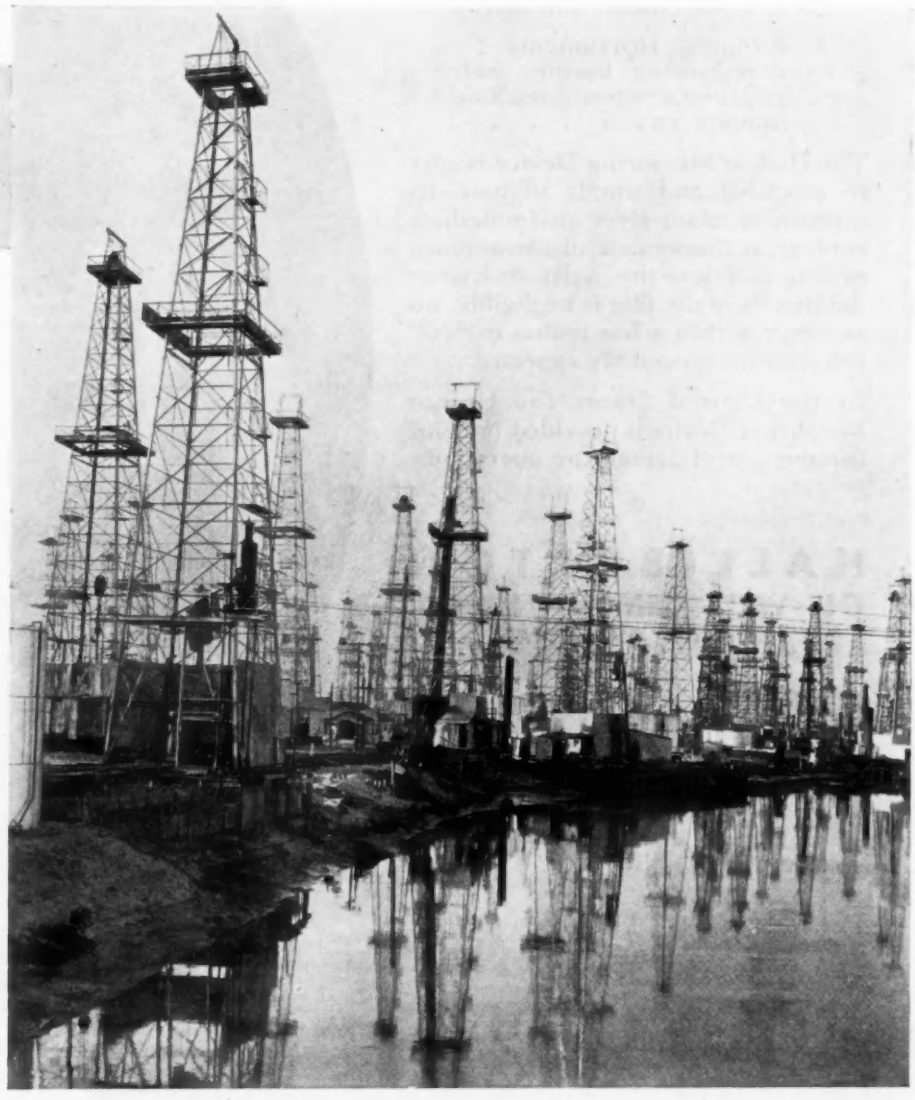
CALIFORNIA gasoline does not hold the preference it held before cracking operations improved the quality of Mid-Continent and Gulf Coast gasolines. This slight loss in prestige has lessened the demand for California gasoline in several sections, including the Atlantic seaboard. Several years ago the average Eastern motorist believed California straight-run gasoline to have a higher anti-knock value than Mid-Continent gasoline. Such a belief was based on sound claims, but improvement of gasoline in other refining districts has stepped up the octane rating to compare with the best California has to offer.

Lower production cost per barrel in several world producing centers has placed California at a disadvantage. Until a few years ago, California's principal surplus was produced from flush fields, and cost per barrel was low. Most of its oil now is produced from semi-settled or old fields, and the state is unable to compete with districts passing through a heavy flowing stage. This development has been a factor in open bidding in world markets.

California is gradually resigning itself to its changing position, and is giving more thought to local consumption. A steady consumption in its own trade territory in the United States has been the bright spot for some time. The greatest profit has not been in the export business, since it served chiefly to permit movement of surplus products, and it is significant to note that markets lost by California were those in which competition was keenest.

INSERT CHART

showing California production and influence of added fields since 1900 is included in this issue.



Playa del Rey, a typical California townlot field. A large number of wells were drilled here in a very short time, but few producers returned a profit. Drilling was done on lots so small that it was necessary to "borrow" a small amount of a neighbor's space to provide room for all equipment. One well was drilled in a garage, but the garage owner took no chances and kept his place open.

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Production Engineering

Recovery of Oil *from Depleted Sands* By Means of Dry Steam

SMITH L. STOVALL
Research Engineer

IT has been estimated that an average new oil field contains 35 percent oil by volume of the sand; an average depleted oil field, 28 to 30 percent. This oil is held in a depleted sand, undoubtedly largely through the action of adhesion and capilarity. Considerable energy is necessary to break down these forces and set free the oil.

Some years ago, the writer discovered that if steam, dry at the point of entrance, is sent into a sand containing oil, all the oil but a trace is removed. The oil is changed neither as to temperature or gravity. It is believed the steam does not come in direct contact with the oil; that when the steam reaches the cool sand, containing oil, it is condensed. There is an interchange of energy in some manner between steam and sand; and the oil is displaced from the sand.

Steam must enter the sand in the dry state for best results. If it carries moisture, emulsion is formed and resistance to the passage of steam through the sand is increased. Water, present in the sand with the oil, interferes not at all with the recovery of the oil. It is recovered for the most part ahead of the oil and without temperature rise.

Many tests were made in a drum nine inches in diameter and 18 inches high. This drum held 66 pounds of fine beach sand. This sand, after being allowed to drain completely, retained nearly six quarts of the crude oil with which it had been saturated. After treatment with dry steam, there remained in the sand one-quarter to one-half pint of oil. The higher the gravity of the oil, the more thoroughly was the sand cleaned. Most of this oil remaining in the drum was contained in sand at the bottom of the drum that could not be treated. When steam had progressed to within an inch or so of the bottom of the drum, it always broke through to the outlet pipe.

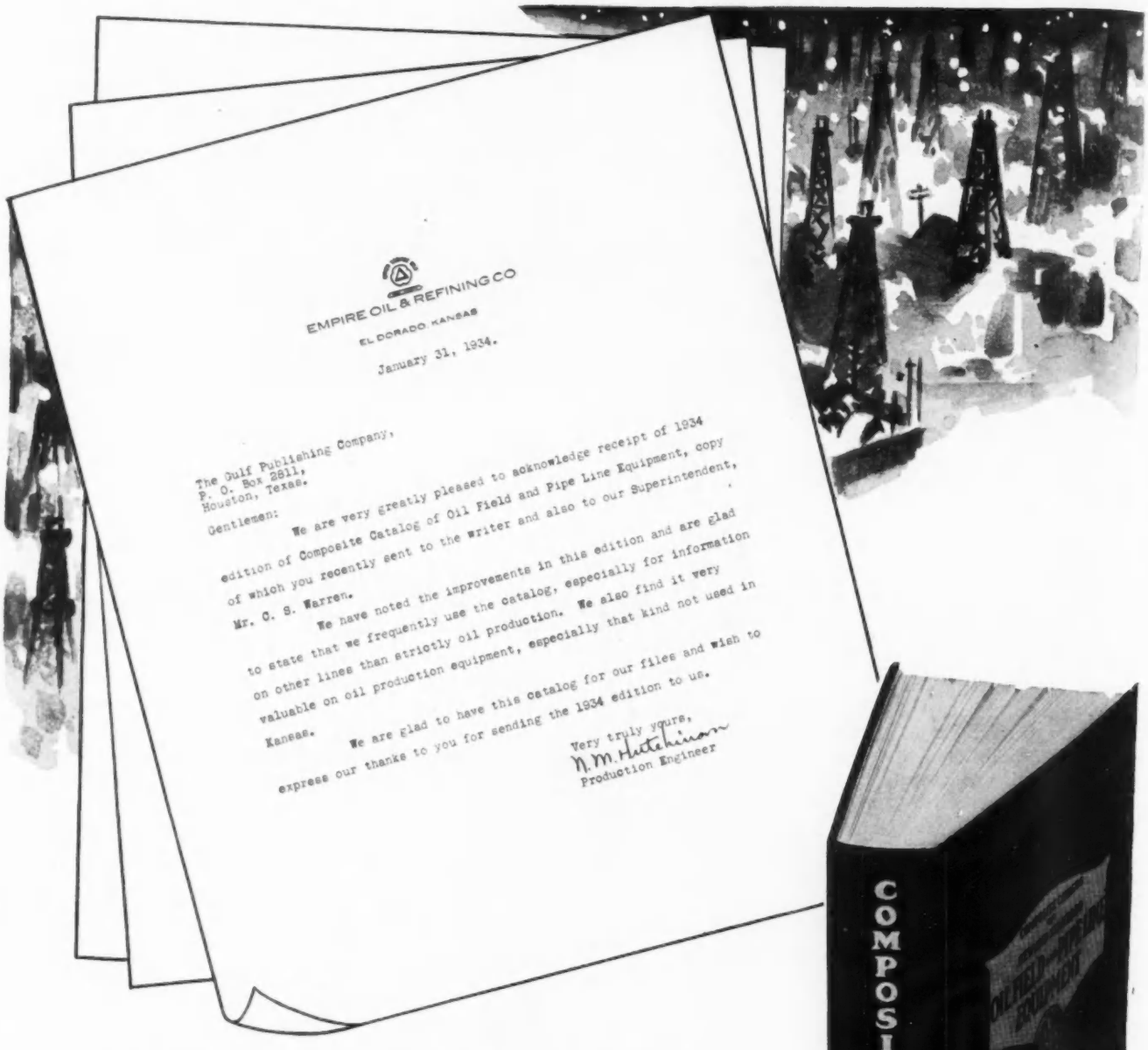
The drum stood on end. Steam was introduced at the top of the drum. Oil was recovered at the bottom. One-half pound of steam pressure was used with superheat of six or eight degrees. Tests usually lasted one hour. Three to 3½ pounds of steam was used for each test; the variation in steam consumption being caused by increased radiation loss for long time tests. The oil, in the case of every test where dry steam was used, was recovered without a change in either temperature or gravity. One to two percent of oil by volume was generally left in the sand.

An old boiler one foot in diameter and five feet long, was laid on its side. This was charged with 375 pounds of sand, 27 quarts of oil, and eight quarts of water. Steam at 4½ pounds pressure and with six or eight degrees of superheat was introduced at one end. The fluid was recovered at the other. All water

SINCE 1926 the author of the accompanying article has worked on a process for removing oil from depleted sands by means of steam, dry at the point of entry into the sand. These experiments were conducted until 1931 in the laboratory; since that time in the field.

This article describes the various experiments and the results of each, and should be of interest to the industry.

AN ENGINEER TESTIFIES . . .



EMPIRE OIL & REFINING CO
EL DORADO KANSAS

January 31, 1934.

The Gulf Publishing Company,
P. O. Box 2811,
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Gentlemen:

We are very greatly pleased to acknowledge receipt of 1934 edition of Composite Catalog of Oil Field and Pipe Line Equipment, copy of which you recently sent to the writer and also to our Superintendent, Mr. C. S. Warren.

We have noted the improvements in this edition and are glad to state that we frequently use the catalog, especially for information on other lines than strictly oil production. We also find it very valuable on oil production equipment, especially that kind not used in Kansas.

We are glad to have this catalog for our files and wish to express our thanks to you for sending the 1934 edition to us.

Very truly yours,
N. M. Hutchinson
Production Engineer

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of Oil Field and Pipe Line Equipment

was recovered and 23½ quarts of the oil. The treated sand was as thoroughly cleaned of its oil as was the case in the smaller tests.

A miniature oil field, 10 feet square and with sand two feet thick, was constructed. Five barrels of oil was stirred into the sand. Steam was introduced at the center at 15 pounds pressure and with some 15 degrees of superheat. The oil was recovered through holes in the sides of the box holding the sand. At the end of the test, the cleaned sand appeared to have been almost entirely rid of its oil content.

Many tests were made in a two-liter flask in an effort to see what took place when the steam reached the cool sand. Though these tests were many and were carefully watched, no very definite conclusion was ever arrived at as to the action of the steam. The treated and the untreated sand were separated by a well marked horizontal plane. So far as could be determined, there was no temperature rise in the untreated sand, even at the dividing plane.

The sand, after treatment, is hot. The steam passes through this hot sand on its way to the cool untreated sand to which, on being condensed, it delivers its energy. The specific heat of sand is one fifth. A pound of steam, when condensed under conditions as they exist in an average depleted oil field, will give up to the cool sand nearly 1000 units of heat energy; a little more than one third of one horsepower hour. Five to six pounds of steam will supply the energy necessary to remove the recoverable oil out of one cubic foot of sand.

Field Experiments

On a lease near Woodson, Texas, belonging to Wilson & Swain, a 380-foot well was drilled for steam injection (See Figure 1), and a core taken of the sand, which proved to be 18 feet thick. The core was taken to a laboratory for examination. Three samples (three feet, nine feet and 15 feet from the top of the sand) were tested for fluid content. These samples carried 5.5 percent, 5.9 percent and 6.4 percent of fluid by weight of sand. Equipment was not available for determining definitely the amount of oil contained in the sand.

At Woodson, a small retort was made, and samples from the same position in the oil sand were run. By this method, it was determined the fluid was composed of three parts of oil to two parts salt water.

It was thought from the above and from experience gained in working with the sand that it weighed nearly 120 pounds per cubic foot; had a porosity of some 25 percent and carried some eight percent oil by volume, some eight percent of water, and eight percent of voids.

Longtime tests were made to determine the coefficient of conductivity of heat through shale. This coefficient was found to be equal to "4". Curve A was constructed using this figure, and shows the penetration of heat into the formations above and below the hot oil sand from day to day. This curve was used in making all estimates of heat loss.

Curve B shows the rise in temperature at the bottom of test holes surrounding the steam well at the end of 140 days. The temperature at the bottom of a test hole 15 feet from the steam well began to rise at the end of 180 days. Curve A indicates that this rise should have begun within 150 days. The above rises in temperature at the bottom of test holes indicate an average loss per hour for 140 days, of 40 B.t.u. per foot of steam pipe. The two-inch steam pipe into the well was not covered with asbestos. The steam well was without casing.

It was determined that fluid rose some 100 to 125 feet in producing wells overnight, its temperature was raised

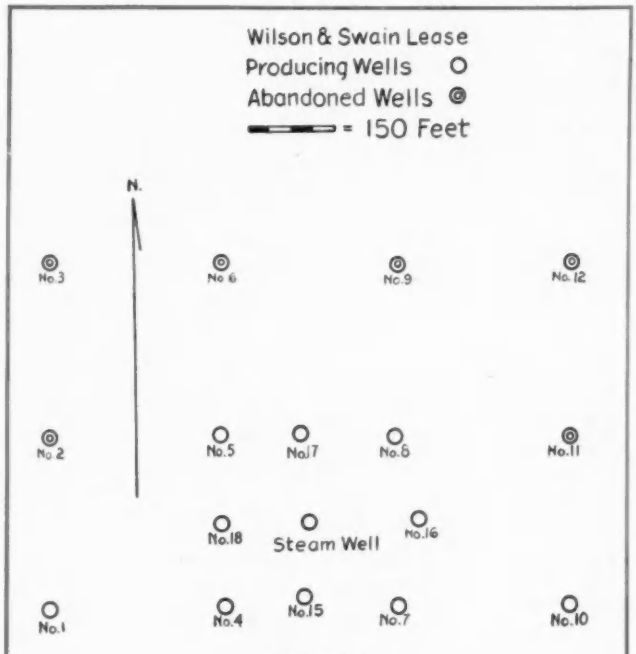


FIGURE 1

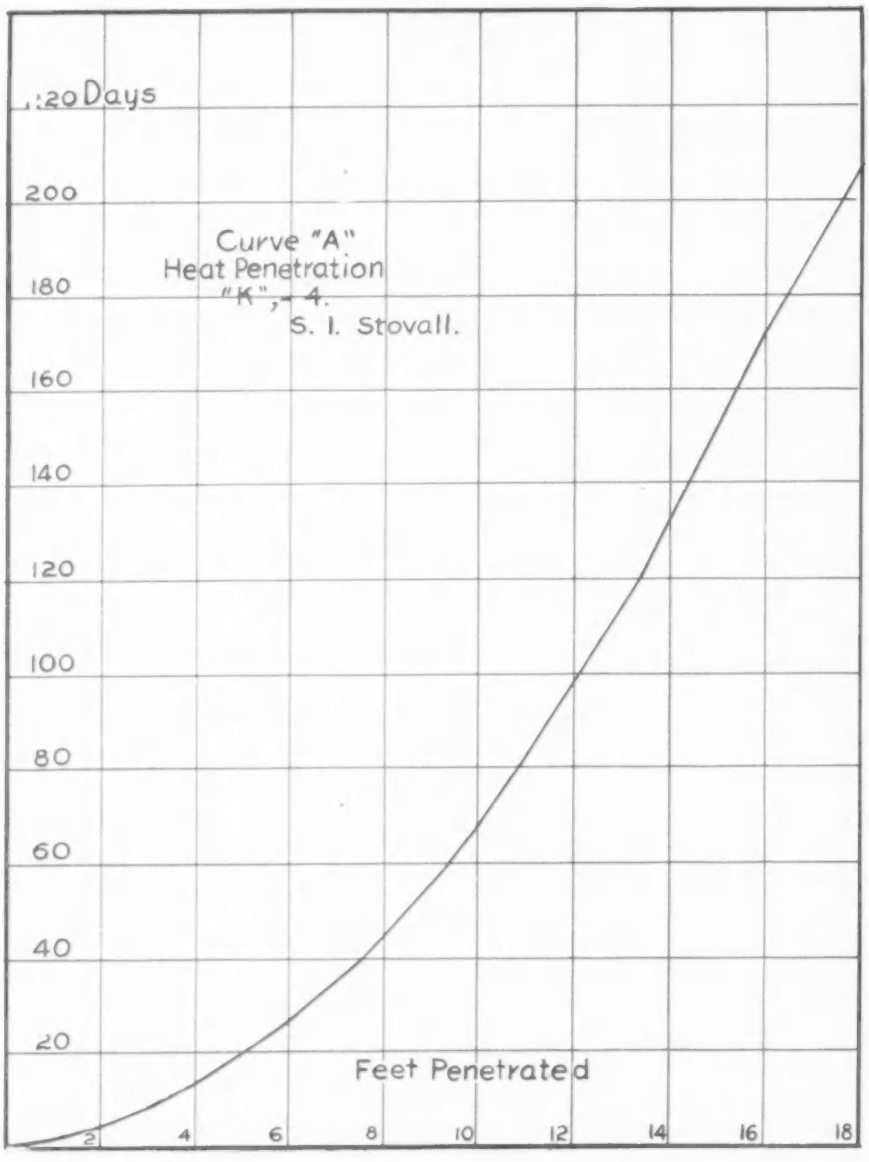
some 230 degrees. This required 46 B.t.u. per pound of sand. Each pound of steam, condensed at this pressure, delivered 907 B.t.u. of energy to the cool sand. Thus, six pounds of steam was necessary in the treatment of each cubic foot of the oil sand. It is assumed that two percent, by volume, of the original fluid was left in the sand.

Steam was forced into the oil sand of this lease from May 23 to January 13, a total of 235 days. From May 23 to August 23, the steam pressure was 150 pounds and some 35,000 pounds of steam entered the sand daily. There was no appreciable increase in production during this time. Production, during this time, was an average of three barrels of oil per day and 1½ barrels of water. August 23 to November 4, the steam pressure was 200 pounds and some 52,500 pounds of steam entered the sand daily. Production increased to an average of 25 barrels of oil per day and 16 barrels of water. November 4 to January 13, the boiler was operated only four hours per day, and some 12,000 pounds of steam entered the sand daily. The production remained at 25 barrels of oil per day and 16 barrels of water. This would seem to indicate that 12,000 pounds of steam moved through the sand.

On November 4, nearly one acre of the lease had been treated. The 12,000 pounds of steam sent into the sand daily till January 13 not only produced 25 barrels of oil per day with 16 barrels of water, 41 barrels of fluid, but supplied the heat lost from an acre of hot oil sand. During this time, 35 barrels of water, as steam, caused the production of 41 barrels of fluid and supplied the heat lost from an acre of sand as well, which was considered a good showing.

Results of Field Trial

It was argued from the very beginning by some that the operation with steam amounted to no more than a water-drive. Every few days, the temperature of the water from well No. 15 was taken and a quart of the water boiled down. This water, throughout the work with steam, kept its original temperature and salt content, indicating the steam was reaching the cool sand and cleaning it of its oil. However, after more than 200 days of sending steam into this thin sand, it was felt that the cleaned sand prob-



ably was nearly full of the water of condensation from the steam that had been sent into the sand. This condition was indicated by the amount of the estimated losses. On January 13, accordingly and after 235 days of operation with steam, water was sent into the sand. This water was carefully measured, 12,000 barrels were required to completely fill the cleaned sand. This gives, seemingly, very definite information concerning (a) the amount of the oil sand that had been cleaned (b) the thoroughness with which this sand had been cleaned, (c) the amount of the heat lost from the hot oil sand, and (d) the amount of fuel necessary to generate the steam to do the work.

A total of 22,000 barrels of water, 7,700,000 pounds, was used as steam during the 235 days. This, plus the 12,000 barrels required to fill the cleaned sand, gives a grand total of 34,000 barrels of water that was sent into the sand cleaned by the steam. Dividing this, 190,400 cubic feet, by 23 percent (25 percent porosity less two percent of original fluid left in the sand) gives a total of 827,826 cubic feet of sand treated. Taking the 12,000 barrels, 67,200 cubic feet, required to fill the sand after it had been cleaned and dividing by 13 percent (25 percent porosity less two percent left in the sand and less 10 percent, the condensate from 6¼ pounds of steam used to treat each cubic foot) we have 516,923 cubic feet in the center of the sand body, containing before being filled with water only the condensate from the steam used in treatment of the sand. This leaves 310,903 cubic feet (one half at top of sand body and one half at bottom) completely saturated with condensate from steam used in the treatment of the sand and from steam supplying the heat lost from the sand to the formations above and below.

Of the total 7,700,000 pounds of steam used, 5,174,000 pounds was used in treating the sand; 2,526,000 pounds supplied the heat lost from the oil sand. A total of 9¼ pounds of steam was used per cubic foot of sand treated, 6¼ pounds for treatment and three pounds to take care of the heat losses.

Slightly more than one acre of the lease was treated, 827,000 cubic feet of the sand. Some 4300 barrels of oil was produced, of which 2300 barrels was used as fuel; 120 barrels per acre of sand one foot thick. This would have been no more than 100 barrels with efficient boiler equipment.

As near as could be determined from a core of this sand, taken from the steam well, this sand had some eight percent of voids. These voids had to be filled with fluid, between the advancing steam and a producing well, before that well could be made to produce. Well No. 15 was finished 46 days after steam was first turned into the sand. It was believed this well was located on the very outside edge of the completely saturated sand. At that time, one fifth of all the sand, included in a circle through well No. 15, 132 feet from the steam well, had been cleaned of its fluid. Wells No. 4 and No. 7 began to increase their production about September 15. At that time, one fifth of all the sand included in a circle through these wells, 212 feet from the steam well had been cleaned of its fluid. In other words, to the south of the steam well, it seemed that the fluid moved out of one cubic foot of sand, served completely to fill the voids in four cubic feet of sand ahead of the steam.

There was but little oil produced north of the steam well. It is probable there are more voids in the sand in this direction. This is indicated by the abandonment of the line of wells along the north side of the lease. Well No. 8 was shot. Samples of sand were secured nearly as large as walnuts. These samples indicated the same texture of sand as was found in the steam well. Some of these samples were without oil content.

This 827,000 cubic feet of cleaned sand, at the start of operations, contained some 10,000 barrels of oil, and 4300 barrels of this was produced. Indications are that all fluid was moved out of this cleaned sand, that the sand was entirely rid of its oil: (a) an amount of oil, nearly equal to one half that originally contained in the sand, was produced; (b) to the south of the steam well, voids in the sand were completely filled with fluid to a distance of more than 250 feet from the steam well; (c) many times the steam pipe to the oil sand was opened wide to the air, never was

there a trace of oil in the steam so blown from the oil sand; (d) 12,000 barrels of water was required to fill the cleaned sand after operations with steam had been ended. It would seem that no more additional data could be wished for other than what would be furnished with a core of the cleaned sand. Such a core can be easily and cheaply obtained.

After the cleaned sand had been filled with 12,000 barrels of water, and beginning about February 1, a water-drive has been carried on. For a time, 100 to 150 barrels of water per day was sent into the sand. On March 3, production was steady at 12 barrels of oil per day and some 25 to 30 barrels of water. On April 15, production was 12 barrels of oil per day and 18 to 20 barrels of water. At this time, water was returned from the gunbarrel tank to the oil sand, and water was pumped from the outside when production showed signs of decreasing. On this date, the temperature of the water from well No. 15 had increased to 85 degrees. The good results obtained up to this time probably were due to the fact that the water was hot when it reached the cool sand and to the further fact that the sand, between the treated sand and the wells, was completely filled with fluid, largely oil. It was indicated at this time that the water had channelled through to Well No. 15. On July 1, production had decreased to nine barrels of oil per day.

Oil could not be produced on this Wilson & Swain lease in sufficient quantity to make the operation profitable. The lease is located on the north edge of a small shallow oil field near Woodson. The sand is lean of oil, carries much water, and has an excessive amount of voids. The oil can be moved through the sand in sufficient quantity by the steam, but there is not enough oil contained in the sand to justify the drilling of sufficient wells to produce the oil so moved.

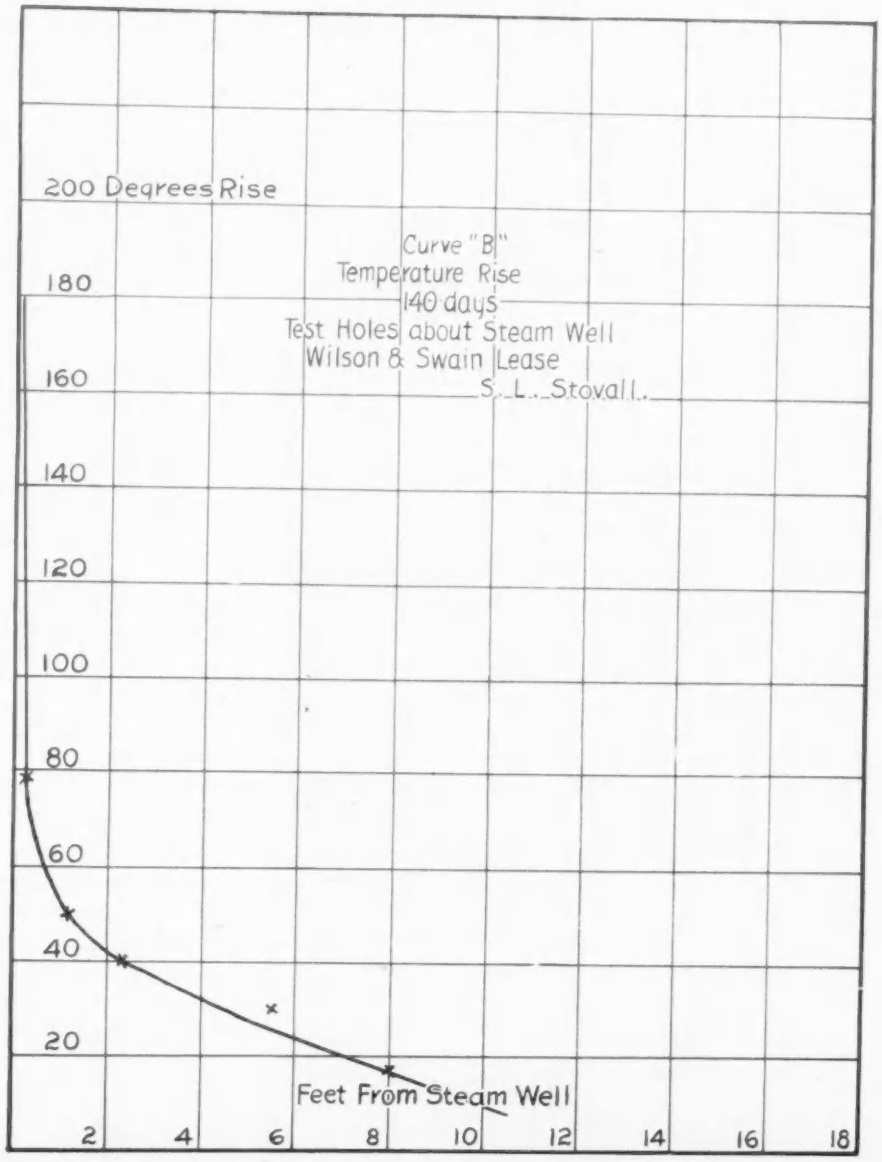
The process has been much abused on this lease. It is essential to successful operation that, once steam is started into the sand there shall be no shut downs. There were many shut downs prior to November 4. After that time, the boiler was operated but four hours out of the 24. It is further essential that the steam be superheated so as to reach the face of the sand dry. The superheater burned out October 5, and was not again put into service.

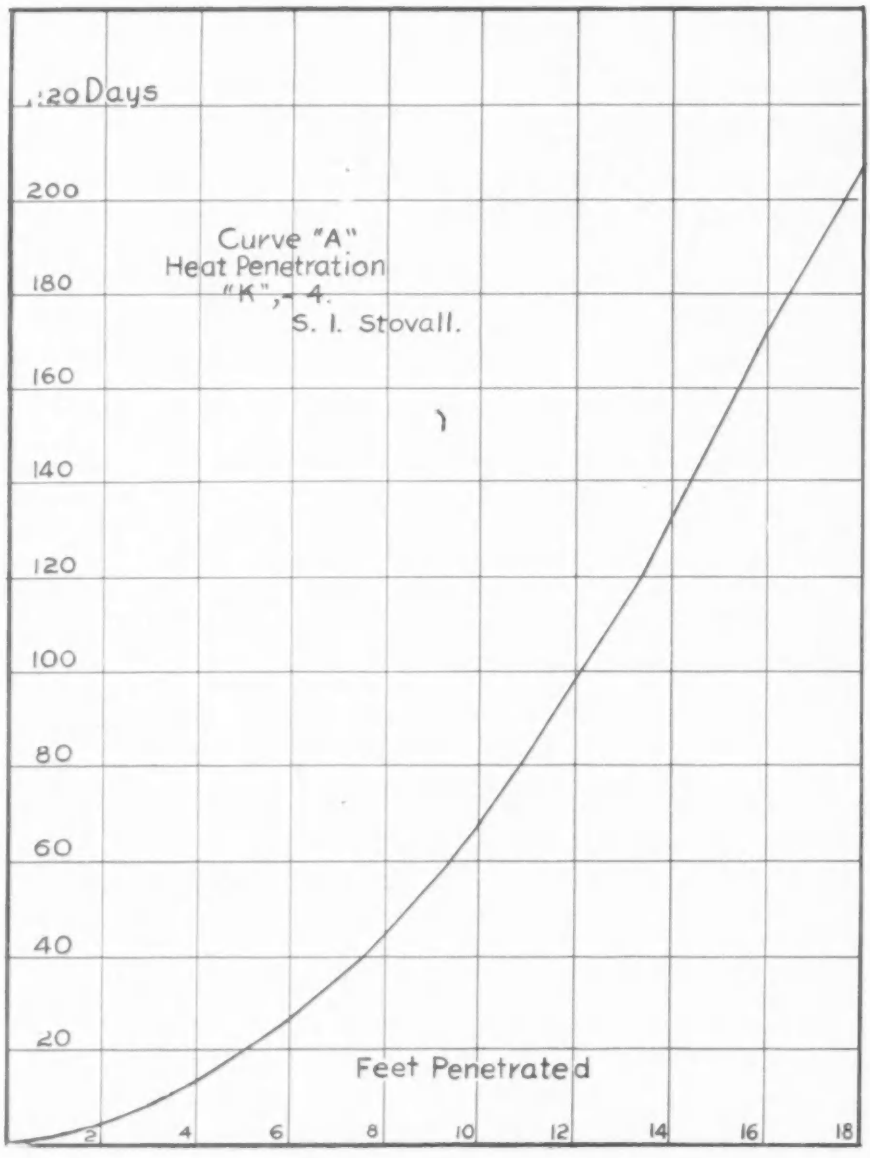
Experimental Conclusions

In spite of all the above, much valuable data was secured. The temperature rise in the test holes about the steam well indicated that the coefficient of conductance for the formations, above and below the oil sand, is no more than "4." The shape of curve "B," constructed from these temperature rises, indicates that the heat loss from the oil sand is much less than as estimated with the use of curve "A." It was definitely determined that fuel consumption for the work need be no more than 100 barrels of fuel oil, or equivalent, per acre of sand one foot thick. It was indicated by the amount of water necessary to fill the cleaned sand that the steam had moved all the fluid originally contained in the sand out of the sand treated. The fluid not produced was moved out of the treated sand to fill the voids in sand of the surrounding territory. During the period November 4 to January 13, 35 barrels of water per day, as steam, caused the production of 41 barrels of fluid, 25 of which was oil, and supplied the heat lost from an acre of oil sand.

Losses proved to be no more than one half the estimated, using "4" as the coefficient of conductance for the formations above and below the oil sand. There was an indicated average loss of only 40 B.t.u. per foot of steam pipe per hour over a period of 140 days. Total steam consumption need be no more than nine pounds per cubic foot of sand treated.

The one thing making for profitable results in the treatment of any lease with dry steam is the provision of sufficient wells to handle the fluid moved through the sand by the steam. It is indicated that the proper area to be worked from one steam well is some five or six acres in extent. It would seem that a minimum of some 120,000 to 175,000 pounds of steam per day, the amount of steam depend-





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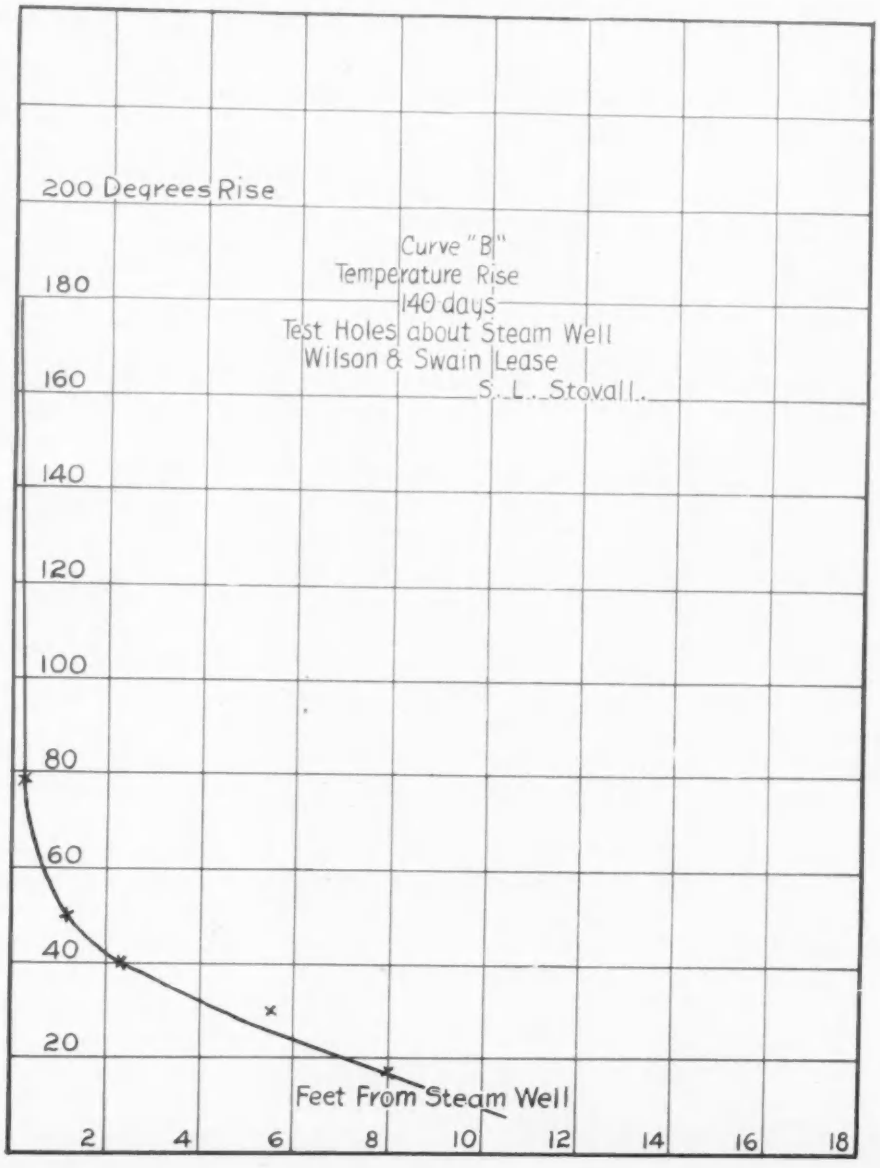
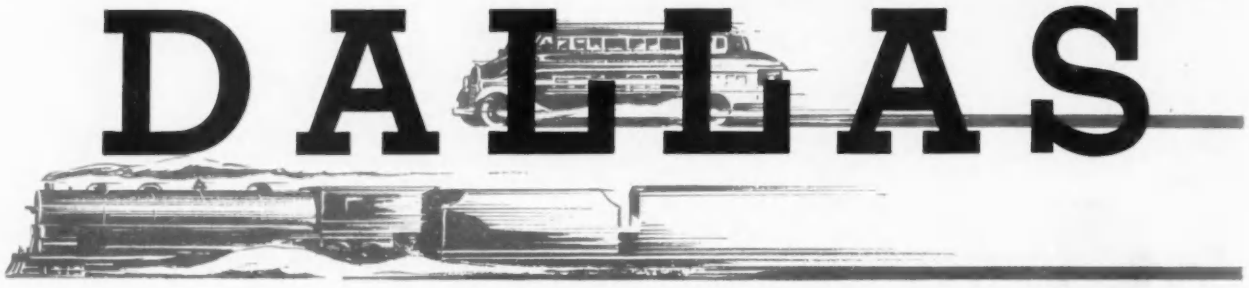


All Roads Lead to

DALLAS



for the

Fifteenth Annual Meeting

November 12, 13, 14, 15, 1934

of the

American Petroleum Institute

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Dallas greets the A.P.I. Come by auto, plane, bus or train—all roads lead here where a vigorous Southwestern welcome awaits the oil men of a Nation. Dallas, geographical center of your oil empire, will become the petroleum headquarters of the world when the American Petroleum Institute meets here November 12-15, 1934.

We're accustomed to entertaining big conventions, but never before the A.P.I. So we've still got to show you what Dallas can do to take care of its guests in the real Texas manner. It's a responsibility we gladly assume, and pledge our best efforts to fulfill.

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Dallas—seen as you arrive from the south by plane. Convention headquarters for the A.P.I. will be in both the Adolphus and Baker Hotels. They are diagonally across the street from each other, a third corner occupied by the Magnolia Building, the tall white building identified by the arch between wings at upper center in the photograph.

Photo by Lloyd M. Long

$30,000,000 in Hotel Accommodations

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ing on the thickness of the oil sand, into the sand is desirable. This steam will move so much fluid through the sand, 600 to 900 barrels per day, that the drilling of wells to produce it is the one problem connected with the work.

It is indicated that thick depleted sands can be treated with greater profit. It is generally agreed that such sands may carry 20 percent to 25 percent of oil by volume of the sand. Such a sand, 100 feet thick, with a recovery of only 10 percent of oil by volume, would give a profit of $45,000.00 per acre with present prices for oil. No more wells would be necessary than is the case with water drive in the Bradford area.

Method of Procedure

Based on experience had with the Wilson & Swain lease, the following is offered as to the method of procedure and as to results to be obtained in the treatment of a well saturated sand 50 feet thick. It is assumed that this sand is no more than 1000 feet from the surface. This assumption is made, not because dry steam cannot be easily delivered to greater depth but, because the wells in most depleted fields are no more than 1000 feet deep.

A well should be drilled no more than 80 to 100 feet from a producing well, and a core taken of the oil sand. This core should be very carefully worked over to give information as to the texture of the sand, its oil content, its water content, and the amount of voids. This information is absolutely essential. The steam pipe should be cemented into this new well in such manner as to give certainty that all steam shall enter the oil sand. Since no well can be made to produce till all voids in the sand, between that well and the advancing steam are filled with fluid, wells at a distance of 250 to 300 feet may not begin to produce for some time. The new well, 80 to 100 feet from the steam well, would begin to produce within two or three weeks and so would supply fuel oil almost from the start. The production of this well would indicate what production is to be expected from wells generally about the steam well and the number of wells needed to produce the oil moved by the steam entering the sand. The saving made in the cost of fuel oil would pay the cost of drilling this well. If the core showed the sand to be satisfactory for treatment, results of proceeding with the treatment of the sand can be foretold with fair accuracy. The drilling of this well is the one financial risk involved in the whole work. This risk can be largely eliminated through a careful study of data concerning the lease before the treatment of the lease is decided upon.

If the core indicated that the sand is satisfactory for treatment, a boiler of 100 horsepower capacity at 200 pounds pressure, with superheater, should be installed near the new well. It is probable this boiler would send into the sand daily some 75,000 pounds of steam at 150 to 200 pounds pressure. The steam would be superheated just enough to make it reach the face of the oil sand in a dry state. This 75,000 pounds of steam would move the fluid out of some 9000 cubic feet of sand; once the voids were filled in the sand out to producing wells, some 400 barrels per day if the sand had a porosity of 25 percent.

A second boiler, like the first, should be set up as soon as the expense justified. These two boilers would give a continuous input of dry steam into the sand.

The area to be treated from one steam well is limited in extent. If the work, from one steam well, be carried on too long the losses become excessive. As soon as it is deemed justified, after operations have been started, plans should be made to divide the lease into areas of the size as indicated by the characteristics of the sand and by the production of the close-in well. The proper area to be worked from one well for a sand 50 feet thick probably is some five to six acres in extent. The two 100-horsepower boilers can be counted on to generate sufficient steam to treat such an area in some 700 days. Heat would penetrate a maximum distance from the oil sand, during this time, of some 30 feet; an average distance over the entire area of some 16 feet. Total steam consumption would be less than nine pounds per cubic foot of oil sand treated.

Under oil field conditions, a pound of fuel oil, or equivalent, can be counted on to generate 10 pounds of steam; with efficient equipment, 12 pounds. Thus, if the sand is well saturated or when the voids have been filled between advancing steam and producing wells, a barrel of oil burned under the boiler will supply sufficient steam to move 15 to 20 barrels of fluid through the sand. If outlet wells are provided in sufficient number, 10 barrels of oil should be easily produced for each barrel burned under the boiler. These two 100-horsepower boilers should cause to be moved through the sand some 750 barrels of fluid per day. They should cause a production of some 400 to 500 barrels of oil per day.

Men who have worked with the process speak of it as a "process of repressuring with steam." There can be but a limited amount of pressure building except in the absence of voids in the sand. It is, more strictly speaking, a process of cleaning the oil out of a sand. As voids in the sand are filled, to greater and greater distance ahead of the steam, with fluid moved out of the cleaned sand, the resistance to the movement of this fluid through the sand will increase. Pressure can be built up only as this resistance increases.

It is believed that every sand will present a problem all its own. True, if there are not too many voids in the sand, steam can be forced into a central well and every well on the lease be made to produce more oil. It must be remembered that the area to be cleaned from one steam well is small, necessarily. It is indicated the oil can be more effectually and efficiently removed from a sand if the lease be divided into suitable areas, as indicated by the characteristics of the sand. These characteristics, together with the price of oil, will indicate the number and spacing of producing wells.

After an area has had its oil cleaned out of its sand, the sand would be filled with water. Two or more areas, adjoining, can be worked simultaneously with marked advantage.

If a lease of 40 acres were to be considered, with sand 50 feet thick and well saturated, there would be contained in the sand of the lease some 4,000,000 barrels of oil. Dry steam can be counted on to move practically all of this. If sufficient wells, properly spaced, are provided, more than one half of this oil can be easily brought to the surface. It should take no more than $5,000.00 to $10,000.00 in cash to handle a project such as is outlined above. This cash would be returned from production in some 120 days.

The use of steam in the above manner has none of the characteristics of repressuring with air, gas or water. When the steam reaches the cool sand it is condensed, delivers its energy, and that is the end of it. The steam advances in a circle about the steam well and very slowly. During most of the time, when the sand is being treated, the advance of the steam amounts to a movement of no more than a few inches daily. Unless this is realized, together with the fact that the steam is condensed on reaching cool sand and disappears, it is hardly possible to understand the various phenomena connected with the working of the process.

Kettleman Hills *Has Undergone Many Changes in* Casing Programs

KETTLEMAN HILLS, after five years of steady development, does not have a fully standardized casing program. Changing field conditions, attitude of various operators, shifting demands for gas or oil of a certain gravity, and other factors have influenced casing practices on both inside and flank leases.

Larger companies have led in changing casing combinations. Thought has been given to the landing point of the first string, reduction of casing cost per well, and sizes run to various shut-off points.

The casing program at Kettleman Hills has been questioned and considered since development operations were started after the discovery of the field in 1928. As a result of this study, many changes have been made from time to time in the original program, as first formulated and approved by leading operating companies. A better knowledge of subsurface conditions as additional wells were drilled has caused these changes.

In development operations the first consideration is that of safety, and the second that of economy. These considerations are of prime importance during drilling operations and in the subsequent producing period. Conservative drilling programs involving elaborate and extensive outlays in material and expenditure may be adopted, but this does not mean necessarily that they are the best, and in a prolific field may not impair seriously the ultimate profits obtained from production. It is unwise to carry out such programs if economies can be introduced that will not endanger the successful completion of the wells, or future production operations. Savings in casing programs, naturally, involve the question of the advisability of using less casing, as well as changes in landing depths for those used. In a deep field, such as Kettleman Hills, any savings effected are material per well, and in considering the total number of wells to be drilled the figure may amount to a considerable sum.

The subsurface conditions with their peculiar or unusual features should determine, obviously, the proper program to follow in any field. A considerable difference of opinion may develop as to what constitutes safety and good practice. The procedure and practice in other developed fields often is considered, but this does not settle the problem. Certain conditions may be thought to be extremely unusual or different in any field. Also the fact that certain programs have been followed in the past does not prove they were best, and should be used exclusively in the future.

As shown on the accompanying diagram, the 60-odd wells completed have an average depth of around 8200 feet. To reach this depth various conditions must be overcome. The drilling operations from the surface to 5575 feet proceeds fairly rapidly and safely. The formation consists of comparatively recent deposits of alternating strata of sand and shale. Several hundred feet of caving blue shale, which may cause some trouble if the mud is not kept in the proper condition, are encountered near bottom. Except for a caving shale zone, the first 5575 feet of formation can be drilled without encountering unusual hazards.

The hard brown shale zone, which presents a number of difficulties, occurs between 5575 feet and 6850 feet, a dis-

tance of 1275 feet. This zone is mostly composed of hard siliceous shales that prevent fast drilling. The rate of making hole decreases materially on encountering this formation. Care must be taken, as it has been found that deviation from vertical at this point, especially on flank locations where the beds are dipping somewhat steeply, has caused considerable trouble. The bottom several hundred feet of this zone includes a large percentage of brittle and crumbly shales that also may cause trouble, unless the mud is kept in proper condition. Two hundred feet below the top of the brown shale, the flowing salt water zone is found. Whether other flowing salt waters occur at other points in the brown shale has not been determined.

It is important to keep the mud in proper condition to prevent thinning, as such occurrence might lead to serious trouble in an open hole above. With the drilling fluid in proper condition, many wells drill through the brown shale zone without noting the presence of this danger, although it may later flow a small volume of 50 to 100 barrels per day to the surface between strings after setting casing below it.

The flowing salt water seems to be under a higher pressure in the south end of the field, and it has caused some trouble in that area. Most of the development operations have taken place in the north end of the field, where the flowing salt water is much easier to handle. Near the base of the brown shale 50 feet above the top of the Temblor oil and gas zone, a bentonite (white clay) marker about one foot thick is found. It is always cored for and watched for in the return ditch when casing is to be cemented immediately above the Temblor.

Between 6850 feet and 8300 feet, a distance of 1450 feet, the Temblor zone is found. It is the formation from which the production of oil and gas is obtained. This zone consists of hard fine to coarse grained sands with some thin partings of gray and brown shales. There are also thin strata of very hard cemented sandstones. The first 600 feet drills fairly fast. Below this depth various thin hard strata are encountered that tend to retard progress. The bottom 300 feet drills rapidly, as these hard thin strata are not present.

The time taken for drilling these wells to 8200 feet varies from four to nine months. The range in completion time varies over such a wide interval due to easier drilling conditions in the north end of the field as compared to the middle area. This is caused by differences in the character of formations and to a difference in the drilling efficiency of various drilling organizations.

The first casing program represents the initial schedule decided upon for safe development operations. Such a program could not be decided upon without some knowledge of the subsurface conditions. This information was obtained from the records of the discovery well, from another well drilling in a different part of the area at that time and from data on formerly abandoned prospect wells that had not been successful in reaching their objective. The records on these wells furnished an imposing list of mechanical troubles. Subsurface conditions were blamed in a large measure for the trouble that occurred with their accompanying mechanical problems. Most of the difficulty was due to the inadequate equipment available at that time and to the fact that drilling technique had not been developed to its present state.

A better understanding of the proper methods to use in handling existing hazards, improved equipment, and an advance in the technique of conducting operations has greatly reduced the problem and it does not now appear so formidable. It stands as a very favorable record that in this field no test fairly well on its way down, has been unsuccessful in reaching its objective. No wells are now standing suspended or abandoned, due to complicated mechanical problems. Two rigs were skidded after drilling to a shallow depth and finding the first conductor string collapsed on drilling out the cement. It was considered safer and more economical to skid the rig and lose this small amount of hole than to attempt to roll out the casing and drill ahead in a reduced hole.

First Casing Program

Under the first program the primary conductor string of 20-inch, 18⅝-inch or 16-inch casing was cemented at an average depth of 1300 feet. This depth was considered satisfactory to case off the surface formations and also a safe depth without danger of failure developing in the casing. This casing was run in with welded collars. The amount of cement used depending upon the distance above the shoe at which the operator desired to put a cement collar around the casing to strengthen it. The amount of cement has varied from 500 to 2000 sacks and sometimes this has been ordinary construction cement. No attempt was made to secure a water shut-off on this string, and after drilling out the cement, hole was made ahead without testing for water shut-off.

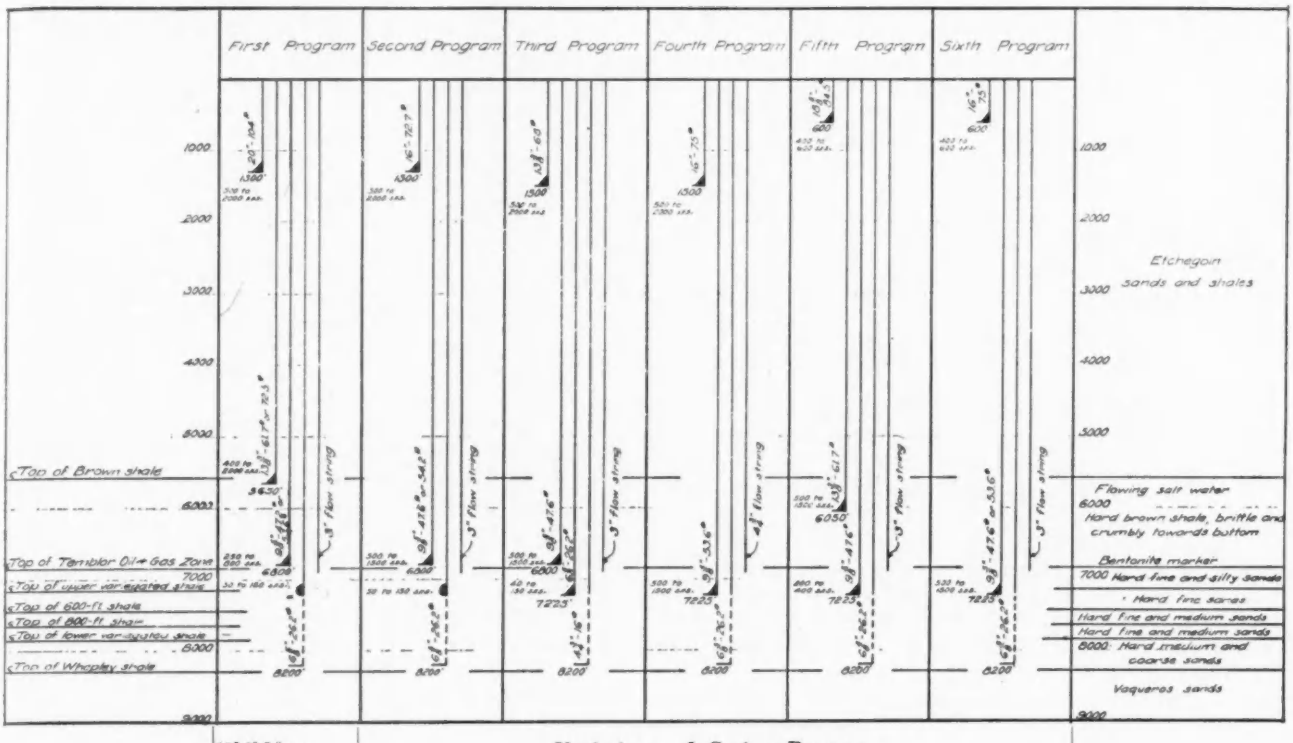
The next string of casing set was the secondary conductor of 13⅜-inch or 11¾-inch casing, which was ordinarily cemented 75 feet below the top of the brown shale zone. Top of the brown shale was determined by coring and checking against the change in rate of the drilling progress, and ditch samples. The cementing point for this casing is safely above the point at which the flowing salt water would be first tapped. It was considered very important to case the hole to this point, eliminate open hole, and thus avoid the risk of thinning the mud with salt water. The amount of cement used depended upon how high the operator desired the cement collar to extend up around the casing. The amount of cement varied from 400 to 2000 sacks and sometimes this has been ordinary construction cement. No attempt was made to definitely obtain a water shutoff on this string and after drilling out the cement, hole was made ahead without testing for water shutoff.

The next string of casing was the first definite and only water string cemented. This casing was 9⅝- or 8⅝-inch and was cemented 35 feet above the top of the Temblor. The cementing point for this casing was determined by the bentonite marker. The casing was cemented a short distance below this marker, and before drilling into the Temblor. Avoidance of drilling into the Temblor was desired in order to make suitable test for water shutoff on casing and to reduce the possibility of gas blowing from the top of the oil zone through the cement plug during swabbing or bailing operations. The fluid in the casing was lowered to 2500 feet to 3000 feet for testing water shutoff. The safe bailing depth on the casing had to be taken into account. The amount of cement used in cementing varied from 250 to 800 sacks depending on whether the operator desired to cement into the casing set in the top of the brown shale.

Attempts to tie into the casing above were considered advisable to prevent the brown shale salt water from flowing up between strings. These operations were only partially successful, as sometimes the salt water started and continued to flow between strings after completing the cement job. It was desirable to obtain a good water shutoff at this point in order to prevent the high head salt water of the brown shale zone from having any access to the Temblor oil zone, as well as to exclude any waters from above the brown shale that had not previously been shut off.

After completing drilling to near the base of the Temblor

Typical Casing Programs at Kettleman Hills



Variations of Casing Program

Cementing point varies from 300′ to 800′ below top of Temblor according to location of well.
Oil strings mostly flush or inserted joint below shoe of water strings.
Depth of flow strings varies from 900′ below to 1900′ above top of perforations.

First Program	Second Program	Third Program	Fourth Program	Fifth Program	Sixth Program
16″-63.5# or 18⅝″-84.5#-1300′ 11¾″-60#-5650′ 8⅝″-36#-6800′ 6⅝″-26.2#-8200′					
18⅝″ in place of 20″ Some oil strings are liners (not full string) and: 7″-30.3# 5¾″-22.5#, 4¾″-16# Some flow strings: 6⅝″, 5¾″, 4¾″; 2½″; and tapered strings as 4¾″ to 3″, 4¾″ to 2½″, 3″ to 2½″, 3″ to 2″, 2½″ to 2″	13⅜″-68#-1300′ 9⅝″-47.2# or 8⅝″-36#-6800′ 6⅝″-26.2#-8200′ 20″-104#-1300′ 9⅝″-47.6#-6800′ 6⅝″-26.2# or 5″-21.7#-8200′ Some flow strings 4¾″	16″-72.7#-1500′ 9⅝″-47.6#-6800′ 6⅝″-26.2#-7225′ 4¾″-16#-8200′ 13⅜″-68#-1500′ 10¾″-45.5#-6800′ 8⅝″-36#-7225′ 4¾″-16#-8200′	13⅜″-68#-1500′ 9⅝″-47.6#-7225′ 6⅝″-26.2#-8200′ Above program not permitted except in outlying wells below 6500′ contour	20″-104#-600′ 13⅜″-61.7#-6050′ 9⅝″-47.6#-7225′ 6⅝″-26.2# or 4¾″-16# or 5¾″-22.5#-8200′ 16″-72.7#-600′ 9⅝″-47.6#-6050′ 7″-30#-7225′ 4¾″-16#-8200′	13⅜″-68# or 16″-72.7#-600′ 9⅝″-47.6#-7225′ 6⅝″-26.2# or 5¾″-22.5# or 4¾″-16#-8200′ Above program proposed but not now permitted.

oil and gas zone at 8200 feet a 6⅝-inch perforated oil string with ordinary flush or inserted joints below the shoe of the water string was landed on bottom. The size of the perforations has been from 100 to 200 mesh with some cases up to 300 mesh. The formation is hard and no difficulties have been experienced from the stratum coming into the hole, even where larger perforations have been used. The upper part of this string of casing below the water string was blank pipe to a point determined by the location of the well and the amount of the upper oil and gas zone the operator desired to blank off. A small amount of water in the top 300 feet of the zone was blanked and cemented off. The upper variegated shale marks the base of this zone. In attempting to shut off the gas and procure wells with a lower gas-oil ratio, the blank pipe was sometimes extended down to the 600-foot or 800-foot shale in the zone and a cement job performed through the top of the perforations at this point. In some of the earlier jobs it was considered desirable to pump in cement sufficient to reach up into the shoe of the water string. The amount of cement used has varied from 50 to 150 sacks. At that time it was considered that the possibility of overhaul work after completion was so far in the future that any forethought as to complications arising from cementing the oil and water strings together was unnecessary. This opinion did not prevail long, and cement has not been pumped up into the water string for some time.

The differences in casing sizes used under the first program, or any other, are regulated by certain considerations the operator has in mind. This involves the amount of clearance desired when running casing into the open hole and this consideration varies as will be noted by reference to the various programs. Also there is the claim of faster drilling time in holes of smaller diameter, thus reducing the cost of the well. These and other considerations cause the differences in casing sizes. Preparatory to setting casing very little underreaming has been done. In a few cases the hole was underreamed before landing oil strings.

Later Casing Program

The second casing program represents a schedule decided upon as not only safe but also more economical after development operations had been carried on for about two

years. The main consideration in reaching this decision was in regard to the flowing salt water in the brown shale. It was found that with the mud in proper condition the salt water did not come into the hole. The flowing salt water now being considered a minor hazard it was considered a safe and economical practice to eliminate the string of casing formerly landed a short distance below the top of the brown shale. This program was approved by the operators and came into general use.

The other considerations remained about as under the previous schedule. More cement was used on the 9⅝-inch or 8⅝-inch water string at the top of the Temblor so as to reinforce it in the absence of the conductor string to the top of the brown shale. In cementing the water string, from 500 to 1500 sacks of cement was customarily used to place the cement above the flowing salt water and to prevent any flow of this water to the surface between strings.

The third program was developed and used because of a general opposition to a certain feature of the previous programs. This feature was the cementing job through the top of the perforations in the oil string. On several of these jobs circulation was not maintained at the surface during the operation, and it was not known where the cement went. After placing some of these wells on production the flow of water or gas led to uncertainty as to the results obtained with these jobs. Wells sometimes produced gas in much larger volume than expected, leading to the deduction that failures to obtain shutoffs with these cement jobs had occurred, or that the zone taken in had been in error. The unfavorable results strengthened the opposition of those opposed to cementing through the top of the perforations in oil strings. It was claimed that jobs of this kind left the wells in bad shape to overhaul in the future in case redrills or corrective work became necessary. Such jobs were admittedly necessary and adisable in emergency cases and for some wells where the size of the hole had decreased to such a small diameter that this procedure was the best alternative.

A few wells have been drilled subsequently with this program as shown. The water string was cemented above the Temblor oil and gas zone, thus omitting the secondary conductor to the top of the brown shale as in the second program. Then in order to avoid cementing in the oil string a secondary water string of 6⅝-inch or 8⅝-inch casing was cemented at the desired point below the top of the Temblor. After this, the oil string of 4¾-inch casing was landed. It was felt that this program insured a satisfactory shutoff below the Temblor, as well as leaving the well in the best condition for any overhaul work that might later become necessary. The first water string was not carried down into the Temblor and a shutoff secured, thus eliminating the secondary water string, because the Division of Oil and Gas of the State of California did not sanction such a practice.

The fourth program as shown on the diagram of casing programs was approved and used on edge locations. Approval was obtained because possibility of damaging the field was not great if the program failed, or if trouble developed later. Under this program only one water string was used, a 9⅝-inch string carried down to the desired point below the top of the Temblor.

This program was suggested and advocated by some operators for general use throughout the field. Approval was not given by the majority (it was rejected for general use), as it was claimed it did not provide for sufficient casing in the hole to protect it properly, and there was danger of letting upper waters into the Temblor in case of a failure of shut off. In its behalf it was agreed that any earth movement that would damage or crook one string of casing would also do likewise to several strings, that cementing of water string in a thin shale stratum with hard fine grained impervious sands nearby down in the Temblor with plenty of cement to reach up into the brown shale would assure a good water shutoff and prevent the brown shale salt water from getting down into the Temblor, and that the saving of a large string of casing to the brown shale justified in some measure any additional risks assumed. The question was one of protecting the oil sands from possible water invasion from water sands above the Temblor.

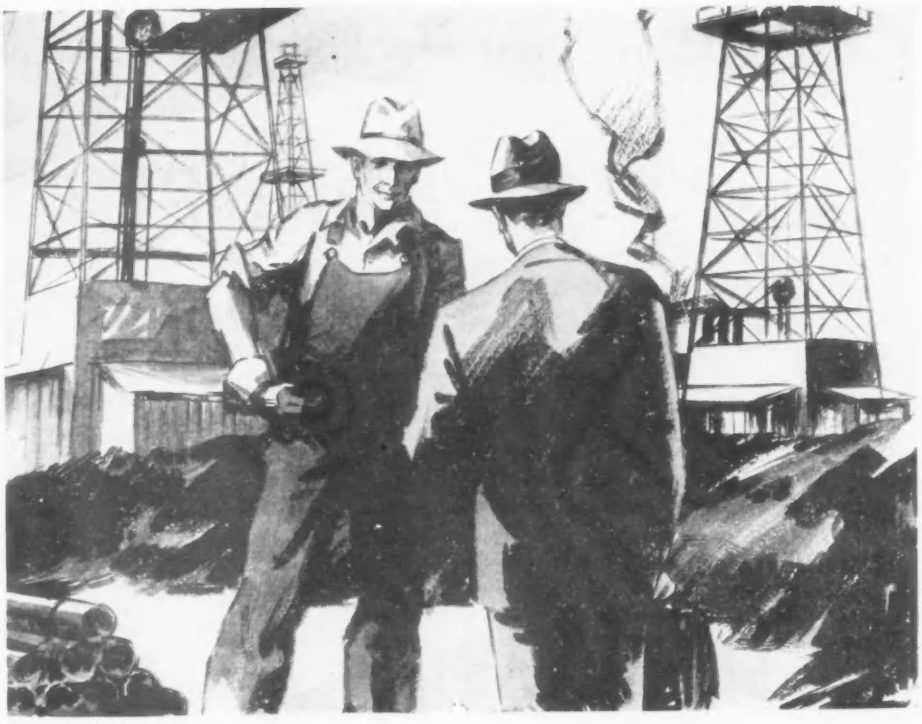
The fifth program as shown on the diagram of casing programs has come into general use during the past few months. There had been some dissatisfaction with the previous programs used. The necessity of cementing through the oil strings under these former programs suggested the need of devising some other plan that would do away with this objectionable feature. This program was devised to provide a casing practice that would furnish adequate protection to the oil zone.

Under this schedule the first conductor of 20-inch, 18⅝-inch or 16-inch casing is cemented at 600 feet. This effects a saving in this size of casing of 700 feet to 900 feet. The primary water string of 13⅜-inch, 11¾-inch or 9⅝-inch casing is cemented at 6050 feet, about 475 feet below the top of the brown shale and 800 feet above the bottom of same. It will be observed that this string is a water string and it is necessary to obtain a satisfactory water shutoff. This is in contrast to the similar string cemented under the first program as a conductor. The purpose of cementing this primary water string is to exclude from the hole all water from the formation above the brown shale and also the flowing salt water known to exist from 100 feet to 300 feet below the top of the brown shale.

Having shut off the major part of the water the program now provides for carrying the secondary water string of 9⅝-inch or seven-inch casing down into the Temblor oil and gas zone to be cemented in a shale bed. With the greater part of the water shutoff by the primary water string, the secondary water string with 200 to 400 sacks of cement behind it will shut off satisfactorily any water existing in the lower part of the brown shale or in the upper part of the Temblor.

This program eliminates definitely the necessity of cementing off through the oil string. It takes care of shutting off the water in a definite and thorough manner, and leaves the well in condition to perform overhaul work in case such becomes necessary. In some cases, as will be observed, the oil string is of sufficiently small diameter to enable washing over to retrieve same from hole if it becomes advisable to remove it. This safety feature is also included in some cases in the other programs.

The sixth program, as shown on the diagram, reduces the amount of casing used in completing a well. This program has not been approved and cannot be used but has been offered and proposed by some operators. What the outcome will be has not been determined. Adoption of this program might put into the discard the fifth program recently put into effect. This program differs from the fourth program only in providing for a much shorter conductor string. The principal object in either the fourth or sixth programs is to save on casing costs. The argument for it is that it protects amply the oil zone and provides a sufficient margin of safety. The negative side takes the opposite view of the matter.



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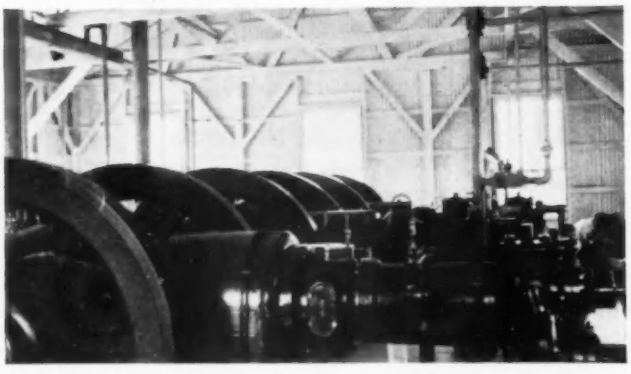
Deep Zone *at East Hackberry Taking Gas Successfully in* Repressuring

A PORTION of the deep producing zone in the East Hackberry, Louisiana, field is being repressured successfully by Union Sulphur Company through use of three stages of compression. Surplus gas from the field is being utilized for repressuring operations, the injection pressure averaging 2360 pounds. Original bottom hole pressure in these 6000-foot producers was high, particularly in the gas wells and high gas-oil ratio completions, but it has declined to a level that permits repressuring at less than 2400 pounds.

Gas is being injected into only one well, the repressuring program being a modest one. Use of a single well may be an advantage in calculating results in the future, since two or three injection wells might make it more difficult to trace results. It might also be difficult to attribute the response of producing wells to any one repressuring operation where more than one injection well is used. The main reason for pumping gas into only one well, however, is that the full volume of gas delivered from the compressor plant may be stored in this manner.

Three 100-horsepower compressors are being used. The three two-cycle gas engines driving the compressors are identical, but the compressor ends are of different dimensions, due to necessity for increasing the gas pressure from a few pounds to almost 2400 pounds. These three stages of compression give the plant one of the highest operating pressures yet developed for this type of work.



This compressor plant picks up the field gas at a pressure of 50 pounds and raises it to 2360 pounds by three compression changes.

The first compressor picks up the gas at a pressure of 50 pounds and discharges it at 220 pounds, using an 8x20 compressor cylinder. The second compressor picks up the gas at 220 pounds and discharges it at 775 pounds, size of the cylinder being 5x20. The third compressor, with a 4x20 cylinder, picks up the gas at a pressure of 775 pounds and discharges it at 2360 pounds. Flow from this compressor is directly to the injection well.

A two-inch line is used between the compressor plant and injection well. The surface arrangement at the injection well is simple, consisting of few connections. The gas passes into the casing by way of a heavy two-inch valve, three-inch cross and swage nipple on top of the string. The Christmas tree arrangement of the injection well is practically the same as that used on producing wells in the field, but heavier equipment in necessary.

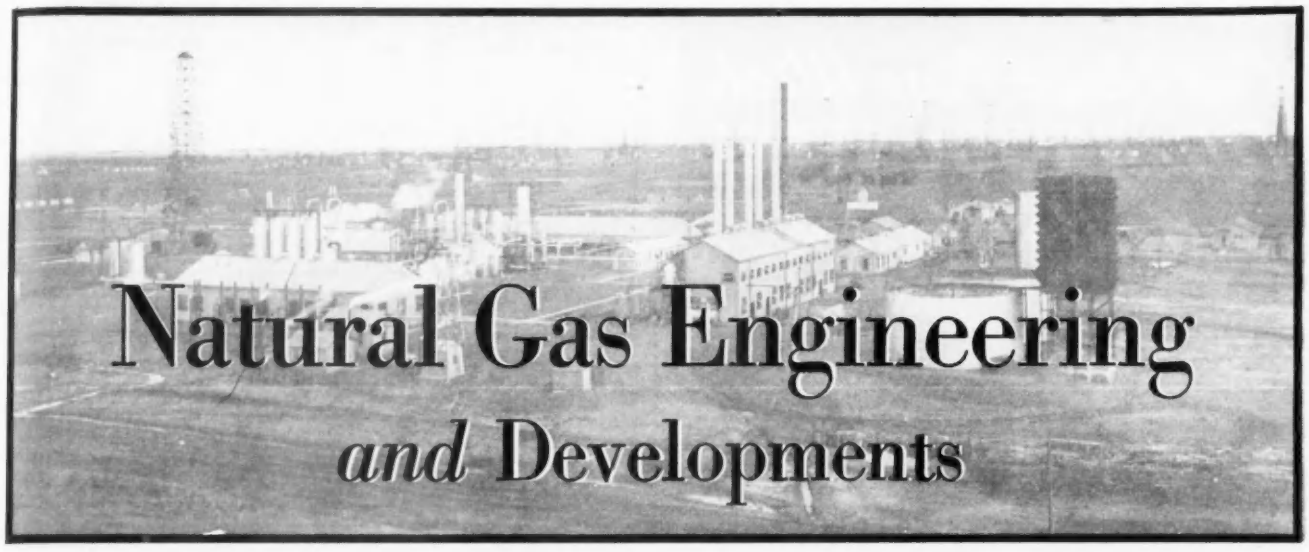
Union Sulphur Company's Humble 8, injection well at East Hackberry.

The company's Humble 8 is the injection well. It originally produced gas and was chosen for use in repressuring operations because it had been a factor in reducing formation pressure, and seemed the logical inlet for the field surplus. A formation that had given up gas readily was expected to take it freely.

About 1,200,000 cubic feet of gas is being stored daily. Only one well has shown a definite response. It is not the producer nearest the injection well, however. Casing pressure of this producing well has increased from 900 to 1400 pounds, and production increased materially. This well has had no trouble in producing more than 900 barrels daily while making its allowable.

Repressuring was expected to affect top wells most and flank wells least. Failure to affect wells similarly located on the structure probably was caused by variation in completion depths. The well affected most seemed to have been completed at the same level as the injection well. Flank producers have shown little change since repressuring was started.

All producing wells nearby may ultimately be affected by repressuring operations, but the difference in completion depths and other factors must be considered. Wells completed slightly higher than the injection well should be benefited first, while those completed lower may ultimately be benefited. The lower producing wells may be benefited in the end, as a greater formation pressure at any point within the producing horizon should gradually expand to give some help to all producing wells nearby.



Natural Gas Engineering *and* Developments

Texas Panhandle May Have 20 Years More of Producing Life

J. C. ALBRIGHT

Disposition of gas now going to waste is most important problem confronting operators.

IT is estimated 16,000,000,000,000 cubic feet of gas is the amount contained originally in the huge reservoir covered by the Texas Panhandle. Since completion of the discovery well in 1918 until the first of January, 1934, 3,914,911,641,000 cubic feet have been produced. There remained at that time an estimated volume of 12,086,088,359,000 cubic feet, from which calculations have been made that show the life of the field will continue for another 15 or 20 years. The tabulations shown in Table 1 furnish a graphic picture of the situation in the Panhandle.

Drilling in the succeeding years following its discovery has proved that gas may be produced from an area embracing 1,300,000 acres. Of this large area, 896,640 acres have a tested open flow of 10,000,000 cubic feet per acre.

The producing area of the field has been extended until it enters into seven counties.

The structural conditions that trapped the gas in the producing formations are anticlines, and the production is found in both the Permian and Pennsylvanian series, coming from lime, granite wash—sand composed of weathered granite—dolomite and askosic dolomite. The average proposity of the producing formations, the thickness of which is estimated to run from 65 to 85 feet, is around 20 percent; a figure arrived at through exhaustive studies of the situation by engineers. The original reservoir pressure averaged from 425 to 430 pounds, both in the gas producing area and the area where both gas and oil are produced, but pressures have declined to such an extent that they are well below 100 pounds in the older oil and gas producing portions of the field. Reservoir pressures are holding up well in the areas where scattered production is taken, and average around 425 pounds. Accurate weighted pressure figures for the entire field have not as yet been worked out and consequently are not available at this time.

As of June 1, 1934, a total of 2021 wells have been drilled in the Panhandle that produce both gas and oil, of which 668 wells are venting gas to the air; the amount of which is estimated to be around 75,000,000 cubic feet daily. The large majority of these wells permitted to waste gas are either too small in volume to warrant tying into the gathering systems of the gasoline extraction plants, or are situated remotely so that it would be economically impossible to lay long lines to conserve the small amount coming from the individual well. Regardless of the small quantity of the individual venting, the total is large, and the total amount of gas wasted from producing oil wells since the discovery of the field cannot be accurately estimated. Figures as of June 1, 1934 are shown in Table 2.

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DEPLETION OF GAS RESERVOIR IN TEXAS PANHANDLE

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January 1934	15,463,946,000	12,070,624,413,000
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March	15,028,862,000	12,040,524,061,000
April	13,575,845,000	12,026,948,216,000

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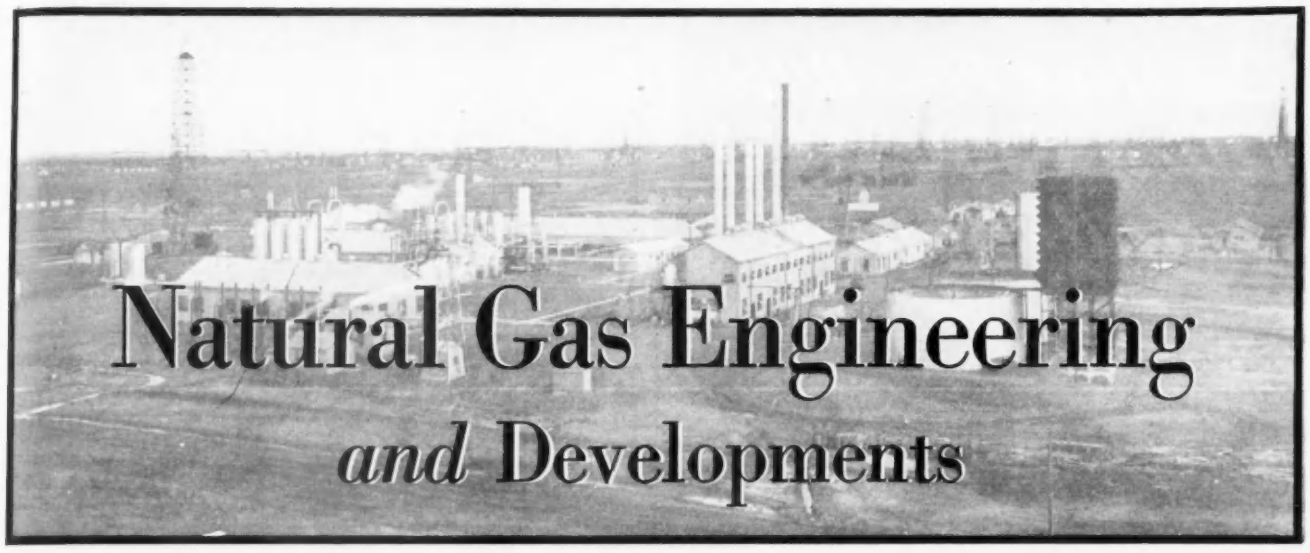

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January 1, 1934	3,914,911,614,000	12,086,088,359,000
January 1934	15,463,946,000	12,070,624,413,000
February	15,071,490,000	12,055,552,923,000
March	15,028,862,000	12,040,524,061,000
April	13,575,845,000	12,026,948,216,000

Cut Your Pipe With Alloy TOOL-STEEL Knife Blades

RIDGID Cutter Blades are far the toughest known — hold their keen edge several times as long as other cutters — give you over 300% more quick clean cuts.

MOST cutter wheels are ground out of steel bar. We die ours out of sheet alloy tool steel, hammer them into blades and then heat-treat them till they're the cuttingest fools you ever put on a pipe. Assembled in a special hub, they fit RIDGID or any similar type cutter—to walk through pipe as if it were butter.

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The New RIDGID Tubing Cutter

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Capacity 1/8" to 1"

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THE RIDGE TOOL CO.
Elyria, Ohio, U.S.A.

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RIDGID
PIPE TOOLS

TABLE 2

County	No. of Wells	Well production bbls.	Total production bbls.
Carson County	253	21.3	5,389
Gray County	940	38.9	36,567
Hutchinson County	752	16.99	12,756
Moore County	11	64.45	709
Wheeler County	65	48.26	3,137
Total	2021		58,558

TABLE 3

	BTU's
Carson County	1094
Gray County	1103
Hutchinson County	1106
Moore County	1056
Potter County	1069
Wheeler County	1070

The constituents of the gas by chemical analysis appears in Table 4.

TABLE 4

Samples	Wheeler County No. 1	Wheeler County No. 2	Carson County No. 1
Oxygen	0.22	0.40	0.40
Carbon Dioxide	0.00	0.00	0.30
Nitrogen	1.59	2.10	1.80
Methane	92.30	91.25	90.58
Ethane	3.09	2.80	1.37
Propane	1.81	2.09	1.37
Butane	0.93	0.82	1.08
Pentane and H.	1.56	1.44	1.57
G. P. M.	0.329	0.307	0.342

The utilization of the production of gas in the Panhandle is shown in Table 5.

TABLE 5

	1932	1933
To Pipe Lines, Light and Fuel	97,087,290,000	109,179,977,000
To Extraction Plants	284,254,033,000	339,244,566,000
Field Uses	5,475,000,000	5,460,000,000
Unconnected Wells	27,375,000,000	27,300,000,000
Raw Gas, Total	414,191,323,000	461,184,543,000
Average Daily	1,134,777,000	1,266,990,000

TABLE 6

To Pipe Lines, Light and Fuel	10,476,290,000
To Extraction Plants	46,180,950,000
Field Uses	450,000,000
Unconnected Wells	2,250,000,000
Raw Gas, Total	60,357,240,000
Average Daily	2,011,908,000

TABLE 7

	Consumption	Extraction Loss	Plant and Local Use
January	1,228,794,000	61,047,000	108,519,000
February	1,327,139,000	60,843,000	126,799,000
March	1,414,977,000	57,608,000	119,822,000
April	1,466,035,000	57,121,000	114,785,000
May	1,539,365,000	55,823,000	130,539,000

	Carbon Black	Industrial and Domestic	To the Air
January	438,616,000	58,875,000	561,737,000
February	443,483,000	54,300,000	631,714,000
March	450,760,000	44,035,000	742,752,000
April	446,887,000	34,329,000	812,913,000
May	453,190,000	34,618,000	865,195,000

The present gas-oil ratio of these wells is approximately 10,000 cubic feet per barrel, indicating that there are approximately 585,580,000 cubic feet of gas being produced from oil wells alone each day. At that rate of withdrawal 213,736,700,000 cubic feet of gas have been taken from the ground during the current year.

The fuel value of the gas from six of the counties producing gas is shown in Table 3.

For the month of May, 1934, Table 6 will show how rapidly the use of this large reservoir is being accomplished.

At the rate gas was being drawn from the reservoir during the month of May, the total yield for 1934 should be pretty close to three quarters of a trillion cubic feet. Multiply the amount used in May, per day, by 365, and it will give a grand yearly use of 734,346,420,000 cubic feet. This amount at five cents per 1000 cubic feet would amount to $36,717,321.00.

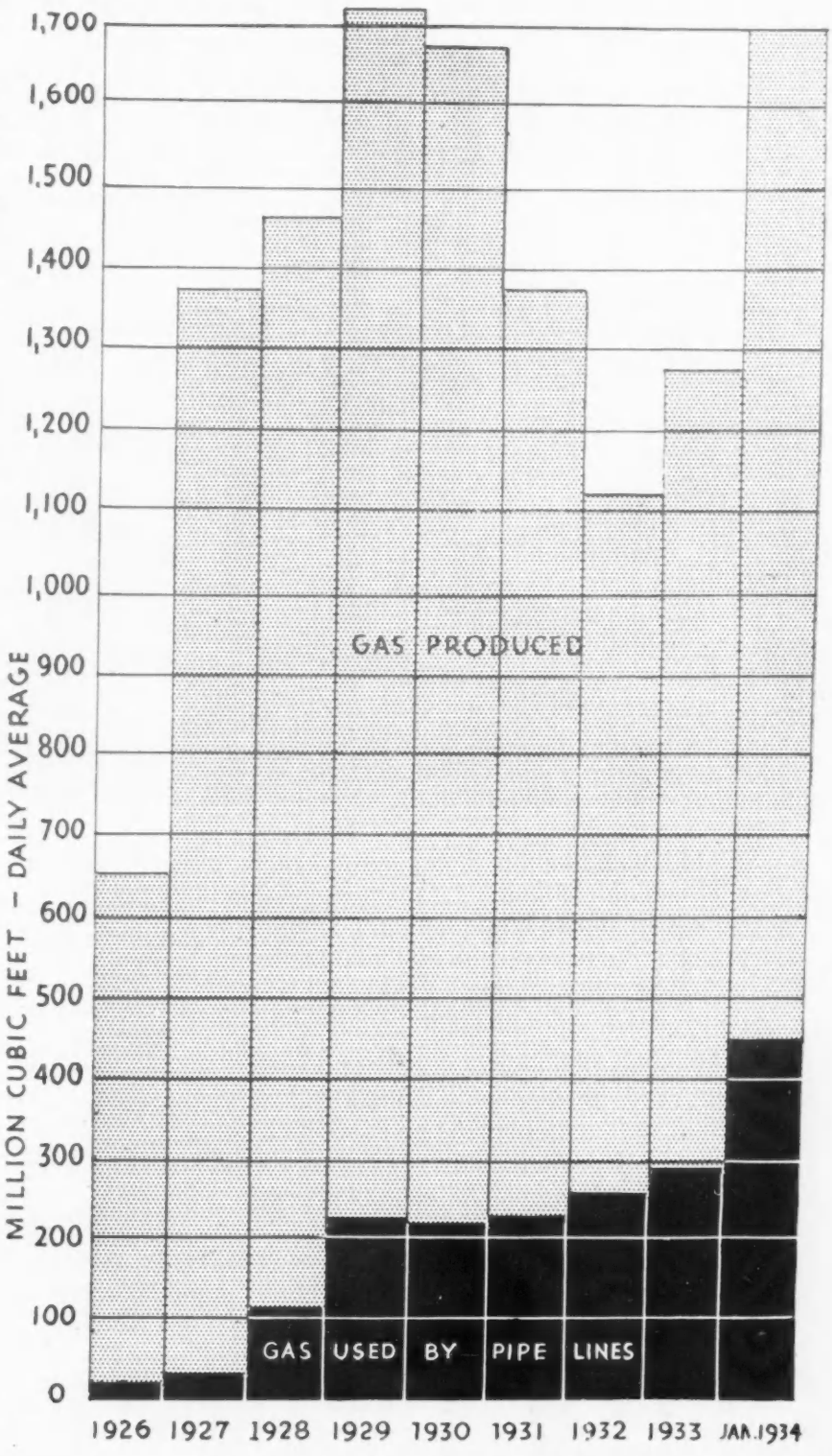
The total amount transported by pipe lines out of the field for the first five months of 1934 amounts to 63,879,488,000 cubic feet, of which only 14 percent remains in the State of Texas, a part of the remaining 86 percent in some cases is transported more than 1000 miles away from the source of the fuel.

In the Texas Panhandle field as of April, 1934, there were 30 carbon black plants taking gas from 41 extraction plants. These plants manufactured an average of 810,000 gallons of casinghead gasoline daily, as of June 20, 1934, and the gas processed through them averaged 0.53 gallons per thousand cubic feet.

Table 7 is a summary showing casing head gas taken and the disposition of the residue for the first five months in 1934.

Table 7 shows average daily figures of gas taken from wells for extraction purposes and the disposition of the residue. Add the 75,000,000 cubic feet of gas going to waste from the unconnected oil wells to the amount going to the air from gasoline plant vent lines and there is a total of 940,195,000 cubic feet of gas being wasted each 24 hours. If this amount of gas could be sold at the average field price of five cents per thousand cubic feet, there would be an additional revenue of $47,009.75 per day.

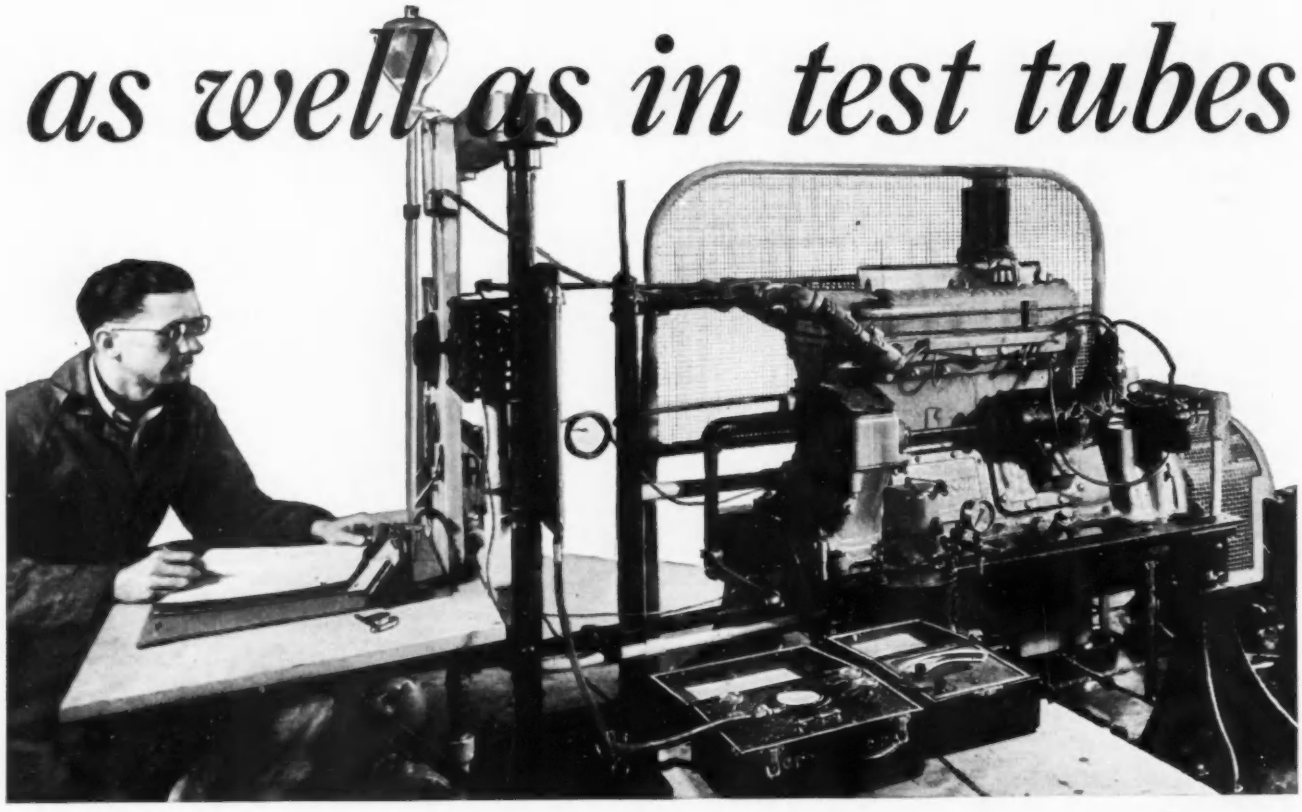
Some attempts have been made to hold down the enormous wastage of gas in the Panhandle; attempts through legislation and through storing the gas in sands above the horizons that now hold the gas. Lone Star Gas Company has made some experiments in the eastern side of the field and have returned successfully excess gas to sands in that area. These experiments are very interesting, and if the formations continue to receive the gas readily the problem of curtailing the enormous wastage of gas in the Panhandle will be solved.



Gas produced in the Texas Panhandle fields

Tested for Motors in Motors...

as well as in test tubes



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MARKETS — STATISTICS

Marketing stabilization plans keep unsteady market prices practically unchanged. Crude prices are expected to remain at present level due to lower August allowable. The reduced August gasoline allowable, which is to be followed by even lower gasoline production in September, may help the refined market.

Markets Continue Disturbed By East Texas Low Prices

DESPITE the industry's present occupation of a particularly favorable statistical position, the markets for petroleum products continue unsettled, especially in the Mid-Continent, with substantial quantities of gasoline being offered in East Texas at distress prices, in the face of major company purchases of surplus material under the market stabilization plan for that district.

Crude oil prices seem assured of continuing for some time at present levels, because of reduced allowables being submitted to by producers during August. But some observers are taking a pessimistic viewpoint even with respect to the crude market, particularly as regards the Mid-Continent, on account of continued high output of "hot" oil in East Texas.

A cut of about 70,000 barrels in East Texas allowable August 1, bringing the authorized production down around 400,000 barrels daily, has sharply curtailed the field's total output. But at the same time it has naturally tended to increase production of "hot" oil, through making the market for legal crude tighter, and consequently through raising bids for illegal crude and thus creating additional incentive for violations. Last week unofficial estimates which appeared to be most acceptable indicated "hot" oil output in East Texas was averaging probably 78,000 barrels daily, or about the same as in the previous week. The estimates of different sources varied considerably, ranging mostly from 60,000 to 100,000 barrels daily.

Under the gasoline market stabilization plan, major companies last week were paying from 3⅞ to 4 cents a gallon for the third grade material mostly involved in the transactions, but substantial quantities of similar gasoline were available in the district for as little as 3¼ cents a gallon. That minimum applied mostly at the plants of refiners not participating in the stabilization plan, but it is reported that some participants have also been offering some quantities at prices less than those involved in the major company purchases. Aside from the gasoline seeking markets in East Texas there were also considerable tanker lots on the Texas coast held by small and semi-major concerns that had not yet been absorbed.

THE OIL WEEKLY

Estimated Average Daily Production of Crude Oil

District or State	Bbls. Daily for Week Ending Aug. 11	Aug. 4
TEXAS—		
Texas Panhandle	60,000	62,000
North Texas	58,000	58,600
West Central Texas	28,000	27,150
West Texas	150,000	147,000
East Central Texas	51,500	51,500
East Texas Field	417,500	471,250
South Texas	60,200	57,000
Texas Gulf Coast	174,000	170,000
Total Texas	999,200	1,044,500
OKLAHOMA—		
Oklahoma City	195,370	96,705
Seminole Area	127,180	104,925
Tatums	6,510	8,820
Lucien	7,150	6,500
Others	198,870	198,225
Total Oklahoma	535,080	415,175
KANSAS—		
Ritz-Canton	14,450	14,400
Voshell	7,750	6,600
Nikkel Hollow	14,300	16,210
Sedgwick	7,325	7,100
Others	85,500	87,840
Total Kansas	129,325	132,150
LOUISIANA—		
North Louisiana	24,525	24,775
Louisiana Gulf Coast	72,000	72,000
Total Louisiana	96,525	96,775
ARKANSAS	31,025	31,500
CALIFORNIA—		
Long Beach	68,000	64,000
Santa Fe Springs	41,000	38,000
Huntington Beach	45,500	41,000
Dominguez	19,000	20,500
Inglewood	10,000	9,000
Ventura Avenue	27,500	30,000
Seal Beach	7,000	7,000
Midway-Sunset	60,000	54,000
Elwood	12,500	12,000
Kettleman Hills	62,500	65,000
Playa del Rey	8,500	8,800
Others	150,500	171,500
Total California	512,000	500,000
MOUNTAIN STATES—		
Wyoming	36,500	36,500
Montana	8,900	8,750
Colorado	3,400	3,350
Total Rocky Mountain States	48,800	48,600
NEW MEXICO	47,700	49,000
EASTERN STATES	102,500	102,000
MICHIGAN	30,500	31,000
Total United States	2,532,655	2,450,700

Octane Groupings Revised

For the whole Mid-Continent refinery prices on gasoline actually weakened last week, although the recession was through an upward revision of octane ratings of all three grades rather than through change of quoted prices. While each grade was changed to embrace gasoline with higher octane rating, the three grades continued to be quoted at prices which had prevailed under the old classifications.

Action of the Mid-Continent refiners in adopting new octane groupings in quoting tank car gasoline resulted chiefly, it was stated, from increasing sales of gasoline with octane ratings as high as 68 to 70 as so-called middle grade material. The new classification makes such gasoline officially middle grade.

Third grade gasoline now embraces all material with octane ratings up to and including 62. It formerly signified 59 octane and below. Middle grade was changed to embrace 63 to 70 octane, inclusive, as compared with 60-64 formerly. Premium grade was raised to represent 71 octane and above, as against 65 and above previously.

Group 3 refinery prices on gasoline under the new groupings as under the old were averaging last week around 4 cents a gallon for third grade, 4⅝ cents for middle grade, and 4⅞ cents for premium grade.

In East Texas two levels of prices prevailed, as indicated above, with major company purchases of surplus gasoline involving prices higher than those available to "shoppers." The average prices for all transactions appeared, however, to be around 3⅝ cents a gallon for third grade, 4¼ cents for middle grade, and 4½ cents for top grade.

The above averages for both Group Three and East Texas are about the same as for the whole past month, and are somewhat higher than the averages prevailing in June and the first half of July.

While East Texas "hot" crude and "hot" gasoline have continued to dis-

turb the whole market outlook, there are various circumstances which have a conteracting influence. The lower allowables for crude and gasoline production during August tend to give the market strength, considering that consumption continues high, and that the reduced allowables are calculated to bring material reductions in stocks.

Another important steadying influence is the impending collection by the federal government of the new one tenth-cent per barrel taxes on crude oil at the well and gasoline at the refinery. The taxes were designed primarily to aid in stamping out "hot" oil, and although enforcement of the taxes has been delayed, the government is proceeding with its program for collecting them; and it is expected that possibly within a few weeks the influence of the taxes will be reflected in lower "hot" oil output.

United States Production Materially Above Allowable

UNITED STATES crude oil production last week was higher by 82,000 barrels than in the previous week, and it exceeded the allowable by practically the same amount, as output in the preceding week had almost coincided with the allowable. For the new week, ending August 11, the nation's total production averaged 2,532,655 barrels daily.

That figure does not take into consideration unreported production in the form of "hot" oil. Most of the nation's "hot" oil output at present is in the East Texas field, and for that area probably 75,000 barrels per day should be allowed for the illegal production last week. Thus the actual excess above the national allowable is indicated to have been around 150,000 barrels daily.

The rise in production for the week of August 11 occurred in the face of a sharp decline in Texas, and was due to a precipitate increase in Oklahoma and a substantial gain in California. Kansas production dropped slightly, and that of Louisiana continued about the same.

Texas reported production dropped below the 1,000,000-barrel level for the first time in weeks, under the influence of reduced allowables ordered by the oil administration and by the Texas Railroad Commission. The new production rate of 999,200 barrels daily for the state was about 45,000 barrels lower than in the previous week. The East Texas field was almost wholly responsible for the lower output of the state. In fact, its production declined about 54,000 barrels, to a new daily average of 417,500 barrels, while some districts of the state showed increases, as authorized in the railroad commission's August schedule.

While Texas was within the allowable of 1,001,300 barrels daily as fixed by the oil code administration as well as within the allowable of the railroad commission, considering only reported production, the 75,000 barrels or so daily of "hot" oil in East Texas pushed the state's actual output above authorized levels.

Oklahoma production jumped last week to 535,080 barrels daily, an increase of 120,000 barrels from the previous week's output. Thus the state exceeded its allowable by 55,000 barrels daily. These figures are indicative of the practice sometimes followed in the state of producing at high rate at the beginning of the month and then cutting back in compensation in the latter part of the month. While the production for the week of August 11 was 55,000 barrels above the August daily allowable, that for the week of August 4, including closing days of July, was 65,000 barrels under the August daily allowable, and 75,000 barrels under the July allowable.

Oklahoma City field's daily production jumped upward about 100,000 barrels in the week of August 11, rising to 195,370 barrels per day. The Seminole area was up about 22,000 barrels in averaging 127,180 barrels daily.

In averaging 512,000 barrels daily last week, California was 22,000 barrels above its allowable, and 12,000 barrels above the previous week's production rate.

How Production Compares with Federal Allocation

	Allocation July	Week Ending August 11[1] Daily Average		4 Weeks, August 4[2] Daily Average	
Arkansas	30,400	31,025	+625	31,800	
California	490,200	512,000	+21,800	519,450	
Kansas	131,200	129,325	−1,875	135,050	
Louisiana	87,200	96,525	+9,325	95,750	
Texas	1,001,300	999,200	−2,100	1,038,600	
Oklahoma	480,100	535,080	+54,980	497,900	
New Mexico	46,700	47,700	+1,000	48,050	
Rocky Mountain	46,800	48,800	+2,000	49,050	
Appalachian States	102,200	102,500	+300	102,200	
Michigan	33,200	30,500	−2,700	30,200	
United States	2,449,300	2,532,655	+83,355	2,548,050	+29,350[3]
Imports crude and fuel oil				127,161	
Crude to Stills[2]				2,570,000	

[1]Oil Weekly estimate for current week. [2]A. P. I. estimate.
[3]Average allowable for period 2,518,700.

Mid-Continent Unchanged Except Fuels Stronger

WITH the exception of the burning oils which had gained additional strength the Mid-Continent market outwardly appeared unchanged during the week. There were, however, several factors which point toward possible general improvement. Principal among these was the tendency to hold to higher prices for U. S. motor even in the face of offerings at considerably lower prices out of East Texas. General belief was that the amount of material available from that area is gradually being decreased and that reports of unlimited amounts are exaggerated. One purchase of 25 cars of 60 to 62. 400 end point at 3¼ cents was reported in Tulsa late in the week but all observers continued to hold to a considerably higher price for this grade.

Crude Runs to Stills; Finished and Unfinished Gasoline; Gas and Fuel Oil Stocks, and Cracked Gasoline Production, Week Ended August 4, 1934

(Figures in thousands of barrels of 42 gallons each)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		Stocks of Finished Gasoline			(a) Stocks of Unfinished Gasoline	(b) Stocks of Other Motor Fuel	Stocks of Gas and Fuel Oil	Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Bulk Term., in Trans. & Pipe Lines	Total at Refys., Term., etc				Potential Rate	Reporting		Daily Average
		Total	%										Total	%	
East Coast	582	582	100.0	502	86.3	5,372	9,733	15,105	1,049	198	11,150	496	471	95.0	74
Appalachian	150	140	93.3	100	71.4	804	726	1,530	299	165	1,109	69	69	100.0	25
Ind., Ill., Ky	446	422	94.6	317	75.1	4,526	2,771	7,297	1,155	53	4,100	325	309	95.1	91
Okla., Kans., Mo	461	386	83.7	233	60.4	3,173	1,780	4,953	574	590	3,667	256	238	93.0	61
Inland Texas	351	167	47.6	86	51.5	983	85	1,068	276	529	1,515	82	66	80.5	22
Texas Gulf	566	552	97.5	457	82.8	3,291	229	3,520	1,614	173	8,802	358	355	99.2	101
Louisiana Gulf	168	162	96.4	127	78.4	873	600	1,473	212	15	2,105	71	71	100.0	15
North La.—Ark	92	77	83.7	56	72.7	227	9	236	100	26	486	41	38	92.7	12
Rocky Mountain	96	64	66.7	36	56.3	750	.....	750	115	40	634	46	42	91.3	11
California	848	822	96.9	427	51.9	10,783	1,595	12,378	1,007	2,311	78,149	209	209	100.0	61
TOTALS WEEK: Aug. 4, 1934	3,760	3,374	89.7	2,341	69.4	30,782	17,528	48,310	6,401	4,100	111,717	1,953	1,868	95.6	473
July 28, 1934	3,760	3,374	89.7	2,464	73.0	31,143	17,454	48,597	6,589	4,100	110,883	1,953	1,868	95.6	479

Below are set out estimates of Crude Runs and Cracked Gasoline Production on B. of M. Basis for Week Aug. 4, 1934 compared with Aug. 1933 Bureau figures.

Estimate B. of M. Basis Aug. 4, 1934	2,500		515
Estimate B. of M. Basis July 28, 1934	2,625		520
U. S. B of M. August 1933: Daily Average Crude Runs	2,553	U. S. B. of M. August 1933. Daily Average Cracked Prod.	532

(a) Amount of unfinished gasoline contained in naphtha distillates.
(b) Estimated. Includes unblended Natural Gasoline at refineries and plants; also blended Motor Fuel at plants.

Improvement in the burning oils appeared to be due to lack of material rather than increased demand. The 26-70 naturals were reported strong at 3 to 3¼ cents but stabilized grades were rocking along at levels established several weeks ago.

Prices based on Group 3, Oklahoma, and exclusive of tax, appeared to be as follows:

Refinery Gasolines

Third grade U. S. Motor, 59 and below octane, 3¾ to 4 cents; middle grade, 59 to 64 octane, 4⅝ to 4⅞ cents; premium grade, 65 and above octane, 4⅞ to 5⅛ cents; 60-62, 400 end point, 3¾ to 4 cents; 64-66, 375 end point, 4⅛ to 4⅜ cents; and 68-70, 360 end point, 4¼ to 4½ cents.

Natural Gasolines

The 26-70 grade, 3 to 3¼ cents with stabilized grades showing continued weakness due to low priced motor fuel.

The 42 to 44 water white, kerosene, 3¼ to 3⅜ cents; and 41 to 43, 3⅛ to 3¼ cents; 38-40 prime white distillate, 2⅝ to 2⅞ cents; 38-40 straw distillate, 2½ to 2¾ cents; 32-36, zero straw, 2½ to 2¾ cents; and 32-36 zero dark gas oil, 2¼ to 2⅜ cents; and 32-36 dark industrial gas oil with fairly low cold test, 2⅛ to 2¼ cents.

September Gasoline Output Reduced 91,000 Barrels

Washington, D. C.—A reduction of 91,000 barrels in daily gasoline production was ordered today by the oil administration, effective September 1, and a reduction of 4,710,000 barrels in gasoline inventories will be required during September. The September allocation announcement of the administration places the daily gasoline allowable at 32,380,000 barrels as compared with 36,270,000 barrels for the current month.

The sharp decline in gasoline allocations and the demand for a reduction of nearly 5,000,000 barrels in stocks is expected to foreshadow a heavy cut in the allowable crude production for next month.

Summary of Field Results During Past Week

State	Completions	Oil wells	Gas wells	Failures	Init. prod.
Arkansas	5	1	0	4	30
California	7	6	0	1	6,520
Illinois	3	1	0	2	2
Indiana	7	3	0	4	180
Kansas	24	18	0	6	9,414
Kentucky	17	11	0	6	790
Louisiana	13	7	0	6	2,628
Michigan	6	4	1	1	1,950
Montana	8	5	1	2	150
New Mexico	1	1	0	0	50
Ohio	42	17	17	8	325
Oklahoma	49	20	2	27	5,645
Pennsylvania	1	0	1	0	0
Texas	189	141	3	45	529,558
W. Virginia	7	2	3	2	7
Total	379	237	28	114	557,249

Comparison of Permits Granted for New Wells

State	Week ending Aug. 11	Total this month	Total this year	Total this date last year	1933 year total
Arkansas	3	4	53	28	47
California	7	16	397	298	593
Louisiana	60	61	499	345	755
Kansas	15	39	597	275	682
Michigan	11	23	281	153	420
Oklahoma	38	63	1,283	519	1,315
Texas	214	408	7,571	3,101	7,845
Total	348	614	10,681	4,719	11,651

Bureau Report Shows High Gasoline Consumption Demand

THE Bureau of Mines monthly petroleum report for June is featured by evidence of continued high consumption of gasoline, a 3,000,000-barrel reduction of gasoline stocks, an increase in crude stocks, and a practically unchanged price index for petroleum products as compared with May.

Motor fuel production increased to 1,184,000 barrels daily in June from 1,163,000 barrels in May. The indicated domestic demand for motor fuel was 36,296,000 barrels, or a daily average of 1,210,000 barrels. That average was lower than for May or for June, 1933, but the new figure is not comparable with the others because of pre-tax buying in June, 1933, and speculative buying in May, 1934. It is indicated, however, according to the government report, that demand in June, 1934, was actually six to seven percent over what it would normally have been a year ago.

The price index for petroleum products during June, 1934, as reported by the Bureau of Labor Statistics was 50.6, according to the report. It had been 50.7 in May and 34.4 in June, 1933.

Refinery data of the report were compiled from refineries with an aggregate daily recorded crude oil capacity of 3,522,000 barrels. These plants operated during June at 72 percent of their capacity, given above, which compared with a ratio of 70 percent in May.

Stocks of refinable crude oil continued to increase in June, totaling 357,239,000 barrels at the end of the month compared with 355,883,000 barrels on hand June 1. The largest increase was in tank farm stocks of East Texas crude.

United States crude oil production in June totaled 80,040,000 barrels, the report showed. That figure represented a daily average of 2,668,000 barrels, or 92,000 barrels more per day than in May, but 94,000 barrels less daily than in June, 1933, the peak month of last year.

Nearly all producing states increased production in June, as in May. California showed the largest increase, the June daily average of 516,000 barrels having been 30,000 barrels higher than in May. Texas output rose to 1,108,000 barrels daily from 1,079,000 barrels in May, with the East Texas field largely responsible, as production rose to 553,000 barrels daily, a new high mark for the year. East Texas drilling had continued at a high rate. Oklahoma's production increased to 551,000 barrels daily in June from 531,000 barrels daily in May, with fields throughout the state showing gains. The new Bosco and Roanoke fields of the Louisiana Gulf Coast became factors in production and caused that state's output to continue increasing.

Oklahoma City.—Permission has been granted Westgate Oil Company to complete its test in the 50-foot buffer zone in the northern edge of the Oklahoma City pool. A permit to drill was granted last year by District Judge Hal Johnson and the decision reversed by the State Supreme Court after the test had been drilled to 5000 feet. In a new trial the decision was again reversed but resumption of drilling will not be allowed until the city council has had time to appeal.

TABLE 1

Supply and Demand of All Oils, From Bureau of Mines June, 1934, Report

(Thousands of barrels of 42 gallons)

	June, 1934	May, 1934	June, 1933	Jan.-June, 1934	Jan.-June, 1933
New Supply:					
Domestic production:					
Crude petroleum	80,040	79,870	82,841	448,680	433,230
Daily average	2,668	2,576	2,762	2,479	2,394
Natural gasoline	2,838	2,907	2,669	17,509	16,309
Benzol[1]	160	172	126	905	591
Total production	83,038	82,949	85,636	467,094	450,130
Daily average	2,768	2,676	2,855	2,581	2,487
Imports:					
Crude petroleum	[2]3,575	[2]3,012	2,143	17,673	16,262
Refined products	1,137	1,444	712	6,911	7,015
Total new supply, all oils	87,750	87,405	88,491	491,678	473,407
Daily average	2,925	2,820	2,950	2,716	2,616
Decrease in stocks, all oils	[2]2,095	2,082	[3]1,384	12,405	[3]11,477
Demand:					
Total demand	85,655	89,487	87,107	504,083	461,930
Daily average	2,855	2,887	2,904	2,785	2,552
Exports:					
Crude petroleum	3,795	3,724	4,378	18,842	15,955
Refined products	6,056	5,915	5,093	37,121	33,538
Domestic demand:					
Motor fuel	36,296	38,141	37,710	192,164	179,934
Kerosene	2,372	3,222	3,115	21,865	18,950
Gas oil and fuel oil	23,961	26,744	25,343	171,004	157,132
Lubricants	1,569	1,941	1,646	9,546	7,763
Wax	87	78	126	497	554
Coke	563	524	596	4,204	4,331
Asphalt	1,602	1,285	1,310	5,181	4,738
Road oil	1,262	779	1,016	2,921	1,835
Still gas (production)	3,707	3,674	4,141	20,959	21,436
Miscellaneous	148	172	133	884	703
Losses and crude used as fuel	4,237	3,288	2,500	18,895	15,061
Total domestic demand	75,804	79,848	77,636	448,120	412,437
Daily average	2,527	2,576	2,588	2,476	2,279
Stocks:					
Crude petroleum	357,239	355,883	348,197	357,239	348,197
Natural gasoline	4,574	4,420	3,763	4,574	3,763
Refined products	227,995	227,410	247,626	227,995	247,626
Total, all oils	589,808	587.713	599,586	589,808	599,586
Days' supply	207	204	206	212	235

[1]From Coal Division. [2]Receipts of foreign crude as reported to Bureau of Mines. [3]Increase.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices—Revised to August 10, 1934)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$ .84	2¢	40—$1.08	9-29-33
N. and N.-C. Texas	28— .79	2¢	40— 1.03	9-29-33
Texas Panhandle				
Gray County	34— .79	2¢	40— .91	9-29-33
Carson-Hutchinson	34— .69	2¢	40— .81	9-29-33
West Texas				
Ector, Pecos, Wk'lr., Crane, Upton, Howard	*.75			9-29-33
and Glasscock	*.70			9-29-33
East Texas	*1.00			9-29-33
Texas Gulf Coast				
Conroe	35— 1.09	2¢	40— 1.19	9-29-33
Tomball	*1.15			9-29-33
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge	Below 20— .82	2¢	34— 1.12	9-29-33
South and SW Texas†	Below			
Refugio (Light)	20— .82	2¢	34— 1.12	9-29-33
Refugio (Heavy)	.85			9-29-33
Saxet	*.85			9-29-33
Mirando	*.80			9-29-33
Pettus	*1.05			9-29-33
Salt Flat	*.87			9-29-33
Darst Creek	*.87			9-29-33
Arkansa				
El Dorado (Light) and Rainbow	29— .79	2¢	40— 1.03	3-17-34
Eldorado East Field and Smackover	*.70			9-29-33
orth Louisiana	29— .79	2¢	40— 1.08	9-29-33
Urania	*.85-*.87			1- 1-34
South Louisiana	Below			
Lockport	20— .80	2¢	34— 1.10	9-29-33
	Below			
Iowa, Cameron Mds.	20— .70	2¢	34— 1.00	9-29-33
Rocky Mountain States				
Salt Creek	29— .84	2¢	40— 1.08	9-29-33

*All gravities—flat rate.
†Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Elk Basin	$*1.17			9-29-33
Grass Creek (Light)	*1.17			9-29-33
Big Muddy	*1.01			9-29-33
Rock Creek	*1.02			9-29-33
Sunburst	*1.35			9-29-33
Lance Creek	*1.02			8-25-33
Osage	*.62			8-25-33
Cat Creek	*.45			8-25-33
Pondera	*.65			8-25-33
Hog Back, N.M.	*1.00			9- 8-33
Lea County, N.M.	*.75			9-29-33
Mid-West States				
Lima	*1.30			9-29-33
Illinois	*1.13			1- 5-34
Princeton	*1.13			1- 5-34
Western Kentucky	*1.17			9-29-33
California				
Signal Hill	14— .65	1¢	16—$ .66	9- 6-33
	17— .69	2¢	22— .84	9- 6-33
	23— .88	3¢	30— 1.09	9- 6-33
Seal B., Alamitos Hts.	19— .65	3¢	20— .68	9- 6-33
	21— .72	4¢	22— .76	9- 6-33
	23— .81	4¢	26— .93	9- 6-33
	27— .98	4¢	30— 1.10	9- 6-33
Huntington Beach	14— .65	4¢	15— .69	9- 6-33
	16— .72	3¢	19— .81	9- 6-33
	20— .83	3¢	28— 1.07	9- 6-33
	29— 1.09	3¢	30— 1.12	9- 6-33
Inglewood	14— .65	4¢	16— .73	9- 6-33
	17— .76	4¢	18— .80	9- 6-33
	19— .83	4¢	20— .87	9- 6-33
	21— .90	4¢	22— .94	9- 6-33
	23— .97	4¢	24— 1.01	9- 6-33
Playa del Ray	14— .65	1¢	15— .66	9- 6-33
	16— .69	4¢	17— .73	9- 6-33
	18— .76	4¢	19— .80	9- 6-33
	20— .83	4¢	21— .87	9- 6-33
	22— .90	4¢	23— .94	9- 6-33
	24— .97	3¢	25— 1.00	9- 6-33
			26— 1.04	9- 6-33
Olinda-Brea Canyon	14— .65	4¢	16— .73	9- 6-33
	17— .76	3¢	28— 1.10	9- 6-33
Athens-Rosecrans Domingues	23— .83	3¢	24— .86	9- 6-33
	25— .90	4¢	26— .94	9- 6-33
	27— .97	3¢	29— 1.04	9- 6-33
	30— 1.08	4¢	31— 1.12	9- 6-33
			32— 1.15	9- 6-33
Elwood (fob ship)	33— 1.03	3¢	37— 1.15	9- 6-33
Torrance	14— .65	1¢	15— .66	9- 6-33
	16— .69	3¢	20— .81	9- 6-33
	21— .83	3¢	26— .98	9- 6-33

*All gravities—flat rate.

DISTRICT	Low Gra .	Dif.	High Grav.	Date
Richfield	15—$ .65	2¢	16—$ .67	9- 6-33
	17— .70	4¢	20— .82	9- 6-33
	21— .83	4¢	22— .89	9- 6-33
	23— .93	4¢	24— .97	9- 6-33
	25— 1.00	4¢	27— 1.08	9- 6-33
	28— 1.11	4¢	29— 1.15	9- 6-33
Whittier-LaHabra	15— .65	3¢	18— .74	9- 6-33
	19— .78	3¢	24— .93	9- 6-33
Montebello	19— .65	1¢	20— .66	9- 6-33
	21— .69	3¢	22— .72	9- 6-33
	23— .76	4¢	24— .80	9- 6-33
	25— .85	4¢	26— .89	9- 6-33
Coyote Hills	16— .65	3¢	19— .74	9- 6-33
	20— .75	3¢	29— 1.05	9- 6-33
	30— 1.09	3¢	34— 1.21	9- 6-33
Santa Fe Springs	21— .72	4¢	22— .76	9- 6-33
	23— .79	4¢	25— .87	9- 6-33
	26— .90	4¢	28— .98	9- 6-33
	29— 1.01	4¢	30— 1.05	9- 6-33
	31— 1.08	4¢	33— 1.16	9- 6-33
	34— 1.19	4¢	35— 1.23	9- 6-33
	36— 1.26	4¢	38— 1.34	9- 6-33
New Hall, Mcklt-trick, Kern River	14— .57		19— .57	9- 6-33
Midway Sunset, Elk Hills, Buena Vista Hills	17— .57	4¢	18— .61	9- 6-33
	19— .64	3¢	22— .73	9- 6-33
	23— .77	4¢	33— 1.17	9- 6-33
Lost Hills	17— .57	4¢	21— .73	9- 6-33
	22— .76	3¢	30— 1.00	9- 6-33
Coalinga	17— .57	1¢	18— .58	9- 6-33
	19— .62	3¢	21— .68	9- 6-33
	22— .72	3¢	25— .81	9- 6-33
Wheeler Ridge	17— .57	1¢	18— .58	9- 6-33
	19— .61	3¢	25— .79	9- 6-33
Kettleman Hills	33— .93	3¢	39— 1.11	9- 3-33
Pennsylvania				
Bradford	*2.25			4- 1-34
Sw Pa., Pipe Line	*2.22			4- 1-34
Eureka Pipe Line	*2.17			4- 1-34
Buckeye Pipe Line	*2.07			4- 1-34
Corning Grade	*1.20			9-11-33
Michigan				
Central Michigan	*1.20			9-30-33
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2 10			9- 9-33
Oil Springs	*2.17			9- 9-33

*All gravities—flat rate.

MAJOR PRICE CHANGES

	Penna. (Nat. Tr.)	Mid-Cont. (36 Gr.)	Calif. (26 Gr.)
March 5, 1933	.....	.....	Cut 24¢
May 2, 1933	.....	Cut 19¢	.....
May 9, 1933	Cut 20¢	.....	.....
May 22, 1933	Up 10¢	.....	.....
June 19, 1933	Up 10¢	Up 19¢	.....
June 26, 1933	Up 10¢	.....	Up 9-12
July 6, 1933	Up 13¢	Up 10¢	.....
July 17, 1933	Up 15¢	.....	.....
July 28, 1933	Up 15¢	.....	.....
August 11, 1933	Up 10¢	.....	.....
August 24, 1933	.....	Up 10¢	.....
August 30, 1933	Up 15¢	.....	.....
September 6, 1933	Up 10¢	Up 10¢	Up 15¢
September 8, 1933	.....	Up 15¢	.....
May 1, 1934	Up 10¢	.....	.....

CRUDE PRODUCTION TAXES

Oklahoma—Three percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

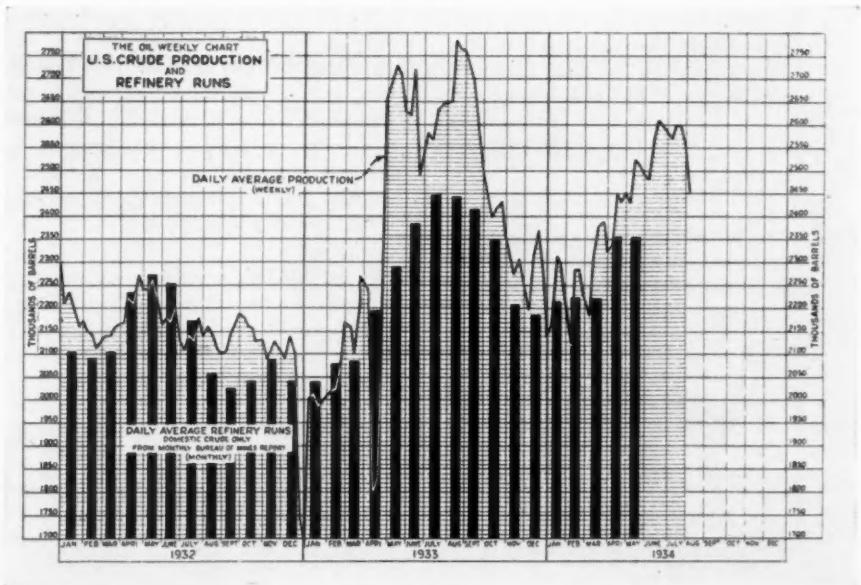
Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Three percent of gross value at well and ½-cent per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.



MEN IN THE INDUSTRY'S NEWS

GEORGE LEGH-JONES

GEORGE LEGH-JONES

Placed directly in charge of Royal Dutch Shell Group's interests in both North and South America.

George Legh-Jones, who has been president of Shell Oil Company, will leave shortly for London where he will take an important part in the management of the worldwide interests of the Royal Dutch Shell Group. He will be Sir Henri Deterding's immediate assistant and will be directly in charge of operations in both North and South America.

Legh-Jones came to the Pacific Coast in 1922 as president of Shell Oil Company (then Shell Company of California). At that time the company's interests represented only a small fraction of what they are today. At that time the company had production only in the Coalinga field, and two refineries. Today it has five refineries, production in practically every important field and marketing activities extend throughout 10 states as well as the Territory of Hawaii and the Province of British Columbia.

He occupies a leading position in the affairs of the petroleum industry as a whole. He has long been a director of the American Petroleum Institute. Last year he was selected as chairman of the Pacific Coast Regional Marketing Committee under the National Code of Fair Competition for the Petroleum Industry.

H. B. FELL, executive vice president of the Independent Petroleum Association, will address a meeting of oil and gas operators at Mt. Pleasant, Michigan, August 13. The meeting is being sponsored by the Michigan Oil and Gas Association.

S. BELITHER has been appointed by the directors of Shell Oil Company to succeed George Legh-Jones as president of the company. Mr. Beligther has a background of many years' experience in all branches of the petroleum industry. For the past year he has been executive vice president of Shell Oil Company and prior to that time he held an executive position with Shell Union Oil Corporation in New York.

THERON WASSON, chief geologist for Pure Oil Company, Chicago, visited the district offices at Fort Worth last week in connection with a meeting of Van field unit members. A periodical adjustment of unit ownership percentages by the five participating companies was taken up at this meeting.

DEL RAMSEY and David Kirk of Tulsa, sailed on July 21 with a seismograph party of Gulf Oil Company for a two-year stay in Venezuela.

T. O. GRISSELL has resigned as executive secretary of the Pennsylvania Grade Crude Oil Association to become sales manager of the Kendall Refining Company, Bradford, Pennsylvania. He will assume this position October 1, succeeding L. H. Shearer, who resigned. Grissell held the place as secretary of the Pennsylvania association from August 1, 1932. He was for many years in the oil fields of Indiana and the Mid-Continent. Later he went into newspaper work and then into the advertising field.

J. R. PEMBERTON completed on July 16 two years of service as oil umpire for California, and celebrated the event with a vacation to Mexico, accompanied by his wife. Central Committee of California Oil Producers gave him a vote of confidence and appreciation.

T. W. RHOADS, petroleum engineer for Gulf Production Company in the Fort Worth division, departed last week for a vacation trip to Vancouver and points in the Pacific Northwest.

CLYDE M. BENNETT, vice president in charge of the land and geological department of Magnolia Petroleum Company, Dallas, Texas, is recuperating in a Dallas hospital from a serious illness experienced several weeks ago.

F. W. WOODS, formerly assistant treasurer and office manager for Shell Petroleum Corporation at Houston, has departed for New York to assume his new duties as assistant to S. W. Duhig, treasurer of Shell Union Oil Corporation. Mr. Woods has been associated with Shell interests since December, 1920, when he was employed as an accountant by National Exploration Company, Tulsa, which was later taken over by Roxana Petroleum Corporation. In June, 1921, he was named treasurer of Wolverine Petroleum Company, Tulsa, remaining with that company until January 1, 1926, when he was transferred to Roxana, later absorbed by Shell, as chief clerk. He was made assistant treasurer in April, 1927, and in December, 1932, went to Houston as office manager.

FRED WILCOX, former Vacuum Oil Company geologist and more recently with a gas concern in Pennsylvania, has been engaged by the Magnolia Petroleum Company to take charge of its West Texas-New Mexico district geological office at Midland, Texas.

CAPTAIN JOHN BRYCE SHAW, geological and land scout in the San Antonio district for Mid-Kansas Oil & Gas Company, and president of the South-

NATIONAL CASING HEADS

TYPES DM & DMK

The National Type DM Casing Head is a simple compact assembly, easy to install and convenient to use. It offers both effective packing against high pressures and safe, positive slip suspension of long casing strings.

The Type DMK Head is very similar in construction to the Type DM, but is used where the inner string is run under pressure, It is designed to eliminate waste, fire hazard and unsafe working conditions by preventing escape of oil and gas.

Bulletin No. 434 free on request.

THE NATIONAL SUPPLY COMPANY

west Oil Scouts Association, is on active duty on the general staff, Eighth Corps area headquarters, Fort Sam Houston, during a mobilization test from August 12 to 25. His mobilization assignment is assistant G-4, with the rank of Lieutenant-Colonel. He has been with Mid-Kansas Oil & Gas Company for the past 10 years and has spent approximately half of this time in Colombia, Venezuela, and Cuba.

JACK DANCIGER, vice president of Danciger Oil & Refining Company, has returned to headquarters at Fort Worth after spending the summer in Mexico City and at his ranch in Northern Mexico.

M "BINK" MANNING

M. "BINK" MANNING, who has figured prominently in Gulf Coast oil circles for the past 20 years, was elected vice president in charge of field operations for Miramar Corporation, headed by R. S. Sterling, former governor of Texas, at a meeting of the company's directors in Houston Saturday, August 12.

Election of Manning to this key position follows the skyrocketing growth of Sterling's comparatively new producing company within the past two years from a small lease development company to a producing unit with more than 15 producing wells, several active locations, and thousands of acres of leases in and around proved oil zones. Miramar Corporation's present growth represents Sterling's greatest activity in the oil industry since his resignation as president of Humble Oil & Refining Company in 1925.

Manning will continue to retain his position as president of Houston Oil Field Material Company, Houston, which he headed in August, 1931, succeeding his brother, S. E. Manning, at the latter's death. On becoming president of Houston Oil Field Material Company, he resigned as superintendent in charge of drilling and production in the Gulf Coast for Humble Oil & Refining Company. That position represented his growth from field superintendent at Goose Creek, Texas, in 1917, when he resigned the same position with Gulf Production Company, which he had served in various capacities in Gulf Coast fields since 1909.

H. L. ZEIGLER, chief clerk in the Mirando office of Magnolia Petroleum Company, has been transferred to Davenport, Oklahoma, where he will occupy a similar position. Zeigler has been at Mirando City for a number of years and is favorably known throughout the oil fields of this section of the state. He will be succeeded by E. L. Morrison, who has been transferred to Mirando City from the Magnolia office at Yale, Oklahoma.

C. K. STILLWAGON, president, Well Equipment Corporation, returned recently to Houston headquarters from Los Angeles, where he spent a week completing new distribution tie-ups for this new Gulf Coast manufacturers' sales organization.

JOSEPH JENSEN, chief petroleum engineer, Associated Oil Company, assisted by Mrs. Jensen, on August 4, entertained present and former employes of the geological, land and engineering departments at the Jensen beach home, Playa del Rey. Seventy-five were present. This is Mr. Jensen's second annual affair of its kind.

EARL E. SMITH, formerly manager of the Tulsa office of National Tube Company, has been transferred to Pittsburgh, Pennsylvania, where he will become assistant superintendent of field work. He is succeeded by Frank Braman who has been in the Tulsa office for several years.

E. E. DAVIS, for several years superintendent in the Oxford-Greenwich, Kansas, district of Shell Petroleum Corporation, has been transferred to Tulsa to become assistant to H. C. Umburn, superintendent of drilling in the Mid-Continent division.

LOGAN W. CAREY, formerly temporary trustee for Consolidated Gas Service Company, has been made permanent trustee of that company by an act of Federal Judge E. S. Vaught under terms of the new Federal Bankruptcy Act which allows consolidated management of the holdings and assets of the company in other states.

N. R. GROVE, Mid-Continent representative of Republic Rubber Company, and C. R. Maloney of the same company, left Tulsa during the week for a tour of the fields of Oklahoma and West Texas. Mr. Maloney is being transferred from the general offices at Youngstown, Ohio, and will work under Mr. Grove.

CARL MARTIN, safety director for Phillips Petroleum Company, is gradually improving following several operations on his left arm. He was seriously injured about seven weeks ago in an automobile accident.

REX HAMAKER, vice president in charge of sales, Reed Roller Bit Company, Houston, spent the latter part of July and a few days in August, in California.

R. S. McKEEVER, vice president of Smith Separator Company, Tulsa, Oklahoma, is in California on a combination business and pleasure trip.

CHARLES KLEIN, treasurer of Mid-Continent Petroleum Corporation, Tulsa, accompanied by Mrs. Klein, has left for London, England, on a combination business and pleasure trip.

BART MEYERS, superintendent, Imperial Oil Company, Ltd., in Venezuela, is making a tour of the Mid-Continent and Gulf Coast oil fields.

LLOYD R. CRAWFORD, 49, president of Producers and Refiners Corporation, Independence, Kansas, died August 8 in a Kansas City, Missouri, hospital. Death was caused by effects of a gassing received during the World War.

HUBERT N. "TURK" URI, 39 years old, prominent Okmulgee petroleum geologist, died at his home on Sunday, August 5. Death was thought to have been caused by a heart attack induced by excessive heat. He had played golf during the morning and at the time of his collapse, was engaged in a game of dominoes with his wife and son. He was a graduate of the University of Oklahoma and had been a resident of Okmulgee for the past 24 years.

Reproduction of the micrograph above shows the interlocking of the flakes of the internal reinforcement used by Barrett. By laminating with the waterproofing agent they give Barrett Pipe Enamels unusual toughness and resistance to soil stresses.

For pipe of large diameter The Barrett Company will furnish equipment required to revolve pipe and spread enamel.

Pipe Lines last longer and cost less per year when they are protected with

Pipe lines coated with Barrett Pipe Line Enamels are effectively guarded against corrosion and electrolysis. The tough film is impervious to moisture, and is strongly dielectric. This means longer life . . . lower maintenance costs. Eighty years of experience in waterproofing and the manufacture and application of protective coatings stand behind Barrett Pipe Line Enamels. The cooperation of a skilled Barrett Technical Staff and Barrett Field Engineers is at your service. 'Phone, wire or write.

Barrett Specification

PIPE LINE ENAMELS

The Barrett Company

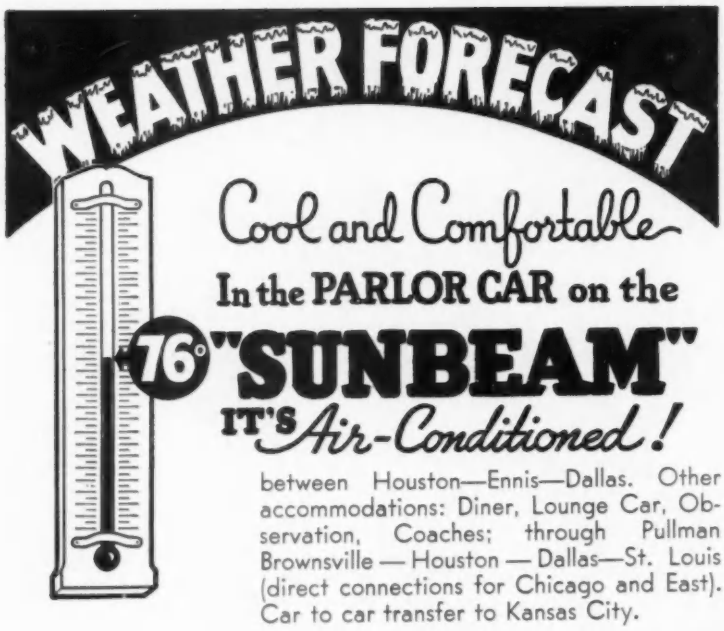
40 RECTOR ST. NEW YORK, N. Y.

Harris County Activity Includes a New Start

Houston.—Hamil & Smith's Humble Fee 2, in the Pierce Junction field of Harris County, was drilling below 292 feet at the close of the week. Humble Oil & Refining Company leased to Hamil & Smith 25 acres in its block located in the BBB&C No. 175 Survey, for a well to be drilled 3600 feet and $10 in cash. The well is 145 feet south of Hamil & Smith's Gulf Fee 2.

D. D. Cogswell has made location for a well in the above field. It will be known as Herman Hospital 1, 525 feet west of the northeast corner, 200 feet south of line of lease in the J. Kopman Survey.

To the north and east of this field, in the Humble field of Harris County, Imperator Oil Company's Lee 1, E. Rual Survey, topped the oil sand at 3711 feet and had a good showing of oil. It is preparing to set casing. Bottom of the hole is 3718 feet. Elevation of the test is 48 feet. The Texas Company's Stevenson 48, in the field, has been abandoned at 2264 feet.



between Houston—Ennis—Dallas. Other accommodations: Diner, Lounge Car, Observation, Coaches; through Pullman Brownsville — Houston — Dallas—St. Louis (direct connections for Chicago and East). Car to car transfer to Kansas City.

Northbound

Lv. HOUSTON	11:25 A.M.
Ar. ENNIS	4:50 P.M.
Ar. FT. WORTH	6:45 P.M.
Ar. DALLAS	5:55 P.M.

Southbound

Lv. FT. WORTH	11:25 A.M.
Lv. DALLAS	12:25 P.M.
Lv. ENNIS	1:20 P.M.
Ar. HOUSTON	6:55 P.M.
Ar. BROWNSVILLE	8:30 A.M.
Ar. NEW ORLEANS	7:35 A.M.

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ROUND TRIP TO LOS ANGELES OR SAN DIEGO.

($10 more to San Francisco) from most Texas points. Similar low fares from all other Texas and Louisiana points.

AUGUST 18 - 19

Return Limit 21 Days.

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"SUNSET LIMITED"

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The "Sunset Limited" is the only train with air-conditioned sleeping accommodations between New Orleans and California.

Other accommodations: Soda-Fountain, Barber, Shower Baths, Standard and Tourist Sleepers, Chair Cars, Coaches.

HISTORY'S NEW LOW FARES

POPULAR PRICED "MEALS SELECT"

Southern Pacific

J. T. MONROE, *Passenger Traffic Manager*, Houston, Texas

New Field Is Opened In Andrews County

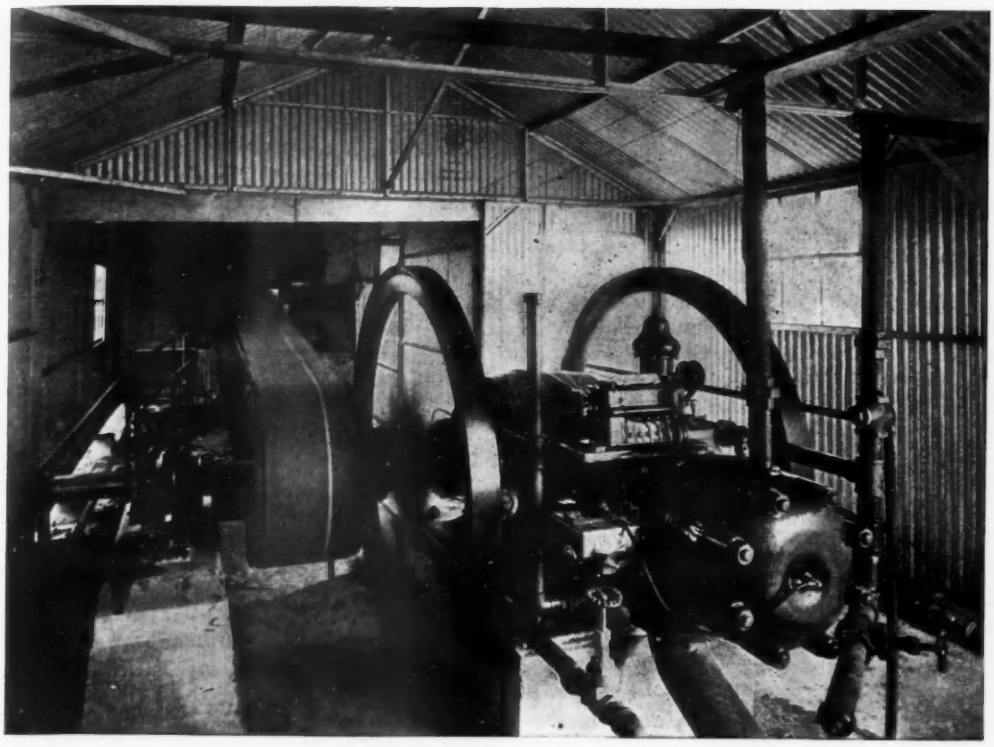
San Angelo, Texas.—A new oil field for West Texas was established August 4 when Humble Oil & Refining Company's R. M. Means 1, North Central Andrews County wildcat, earned an initial rating of 300 barrels daily, flowing natural through open 2½-inch tubing from dolomite at a total depth of 4472 feet, or 1305 feet below sea level. This new strike is near the center of a large block of leases held by the discovery company, and is about 11 miles northeast of nearest production, which is from the same general lime horizon. The well is located in the NEc Section 2, Block A-35, P. S. L. Survey.

A pipe line outlet for the new area is to be attained through the extension of Humble Pipe Line Company's gathering system serving the Deep Rock and Fuhrman areas in the southern part of Andrews County.

The Means Ranch producer is the first discovery made in the district in several months, and was generally anticipated because of key formations and a heavy flow of gas at 2957 feet pointing to the presence of a structure in the area, thereby confirming earlier geophysical surveys. Oil saturated lime was first encountered near the 4150-foot level in Means 1, while cores taken at 4307-4329 feet showed the best porosity. An accurate check on the series of oil producing zones in the lime section was not possible, as the well was drilled in with rotary. Liberal usage of mud weighting material to prevent a blow out is believed to have cut down the potential flow of the well. Humble Oil & Refining Company is reported to have outlined a conservative development program for its discovery block, although it has a big investment in leases and royalties.

Gulf Production Company's J. T. McElroy 103, Upton County, was preparing to drill deeper late last week after failing to show oil, gas or water when washed down to its present depth of 10,633 feet. This record depth test for Texas has been in the spot light lately through having cored siliceous lime, presumably Ordovician age, from 10,564 to 10,633 feet, showing evidence of oil and gas production. The prospects were considered ample to justify cementing 7⅝-inch pipe at 10,301 feet, primarily to try for production and also to safeguard the hole in continuing to the Ellenberger limestone section of the Ordovician, the original goal. The test is now in excellent condition to shoot for a new record depth, as all other deeper tests in Oklahoma

SOUND ENGINEERING



Wilcox Oil & Gas Company's Hyatt-equipped 50 H. P. Weber Engine Operating in the Oklahoma City field.

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Improved performance and reduced maintenance have resulted from the use of Hyatt Roller Bearings on the Weber Engine Main Crank Shaft.

This gas engine application is typical of the easy way Hyatt Roller Bearings handle tough assignments in all kinds of oil field equipment. Proving that no matter where they are used, you can depend on Hyatts because they are designed and built to withstand wear and tear with minimum attention.

So whether you build, buy or sell oil field equipment, you will find in the interest of sound engineering it is good business to consider Hyatt protection. Hyatt Roller Bearing Company, Newark, Detroit, Chicago, Pittsburgh, Oakland.

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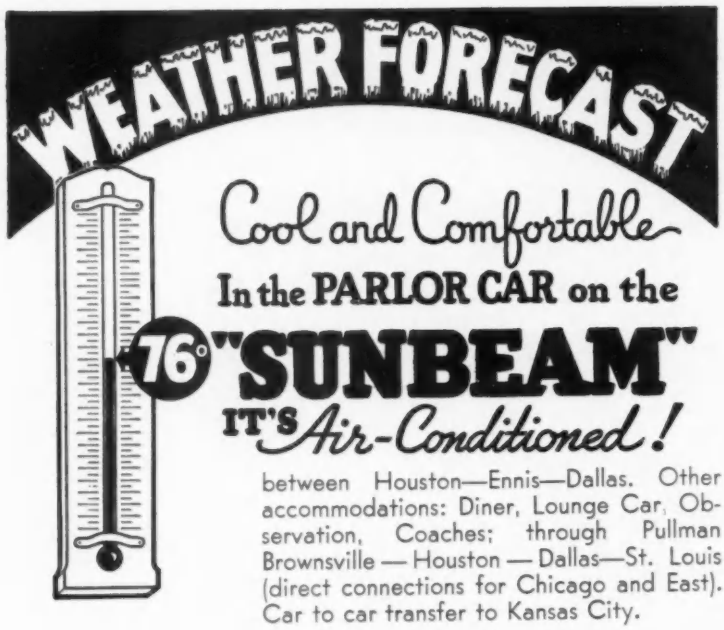
Harris County Activity Includes a New Start

Houston.—Hamil & Smith's Humble Fee 2, in the Pierce Junction field of Harris County, was drilling below 292 feet at the close of the week. Humble Oil & Refining Company leased to Hamil & Smith 25 acres in its block located in the BBB&C No. 175 Survey, for a well to be drilled 3600 feet and $10 in cash. The well is 145 feet south of Hamil & Smith's Gulf Fee 2.

D. D. Cogswell has made location for a well in the above field. It will be known as Herman Hospital 1, 525 feet west of the northeast corner, 200 feet south of line of lease in the J. Kopman Survey.

To the north and east of this field, in the Humble field of Harris County, Imperator Oil Company's Lee 1, E. Rual Survey, topped the oil sand at 3711 feet and had a good showing of oil. It is preparing to set casing. Bottom of the hole is 3718 feet. Elevation of the test is 48 feet. The Texas Company's Stevenson 48, in the field, has been abandoned at 2264 feet.



between Houston—Ennis—Dallas. Other accommodations: Diner, Lounge Car, Observation, Coaches; through Pullman Brownsville — Houston — Dallas—St. Louis (direct connections for Chicago and East). Car to car transfer to Kansas City.

Northbound

Lv. HOUSTON	11:25 A.M.
Ar. ENNIS	4:50 P.M.
Ar. FT. WORTH	6:45 P.M.
Ar. DALLAS	5:55 P.M.

Southbound

Lv. FT. WORTH	11:25 A.M.
Lv. DALLAS	12:25 P.M.
Lv. ENNIS	1:20 P.M.
Ar. HOUSTON	6:55 P.M.
Ar. BROWNSVILLE	8:30 A.M.
Ar. NEW ORLEANS	7:35 A.M.

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New Field Is Opened In Andrews County

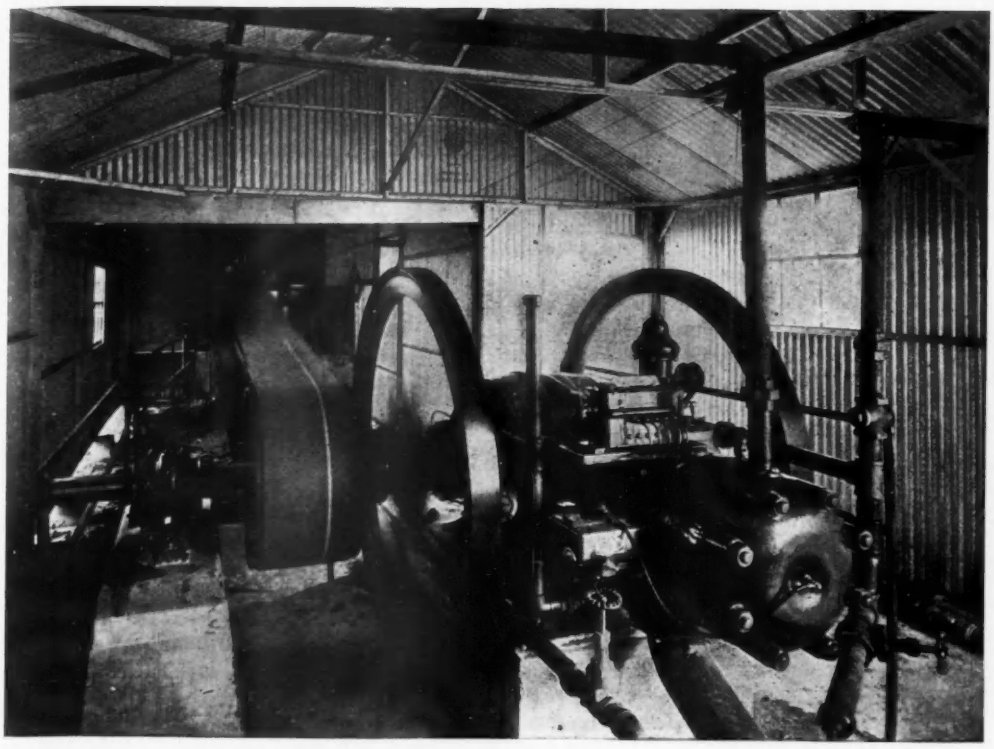
San Angelo, Texas.—A new oil field for West Texas was established August 4 when Humble Oil & Refining Company's R. M. Means 1, North Central Andrews County wildcat, earned an initial rating of 300 barrels daily, flowing natural through open 2½-inch tubing from dolomite at a total depth of 4472 feet, or 1305 feet below sea level. This new strike is near the center of a large block of leases held by the discovery company, and is about 11 miles northeast of nearest production, which is from the same general lime horizon. The well is located in the NEc Section 2, Block A-35, P. S. L. Survey.

A pipe line outlet for the new area is to be attained through the extension of Humble Pipe Line Company's gathering system serving the Deep Rock and Fuhrman areas in the southern part of Andrews County.

The Means Ranch producer is the first discovery made in the district in several months, and was generally anticipated because of key formations and a heavy flow of gas at 2957 feet pointing to the presence of a structure in the area, thereby confirming earlier geophysical surveys. Oil saturated lime was first encountered near the 4150-foot level in Means 1, while cores taken at 4307-4329 feet showed the best porosity. An accurate check on the series of oil producing zones in the lime section was not possible, as the well was drilled in with rotary. Liberal usage of mud weighting material to prevent a blow out is believed to have cut down the potential flow of the well. Humble Oil & Refining Company is reported to have outlined a conservative development program for its discovery block, although it has a big investment in leases and royalties.

Gulf Production Company's J. T. McElroy 103, Upton County, was preparing to drill deeper late last week after failing to show oil, gas or water when washed down to its present depth of 10,633 feet. This record depth test for Texas has been in the spot light lately through having cored siliceous lime, presumably Ordovician age, from 10,564 to 10,633 feet, showing evidence of oil and gas production. The prospects were considered ample to justify cementing 7⅝-inch pipe at 10,301 feet, primarily to try for production and also to safeguard the hole in continuing to the Ellenberger limestone section of the Ordovician, the original goal. The test is now in excellent condition to shoot for a new record depth, as all other deeper tests in Oklahoma

SOUND ENGINEERING



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and California have set smaller casing and are likewise operating in bore holes of a smaller diameter.

A successful workover job has been completed on Big Lake Oil Company's University 12-C, Big Lake field deep producer, resulting in a flow of 285 barrels of oil and 1,300,000 cubic feet of gas daily via combination string of 2½-inch and three-inch tubing set at 8672 feet, with the hole plugged back from 8857 to 8700 feet. It was a small producer when first completed last December, and in February was plugged back to 8787 feet and treated with 5000 gallons of acid, but with no appreciable results. The same company's University 15-C, only deep test underway in the field, is drilling below 7900 feet. Although a number of the deep wells in the Big Lake field have ceased to yield production in commercial quantities, not one has been plugged abandoned as the Big Lake Oil Company and Group One Oil Corporation plan to join in making a test below the Ordovician.

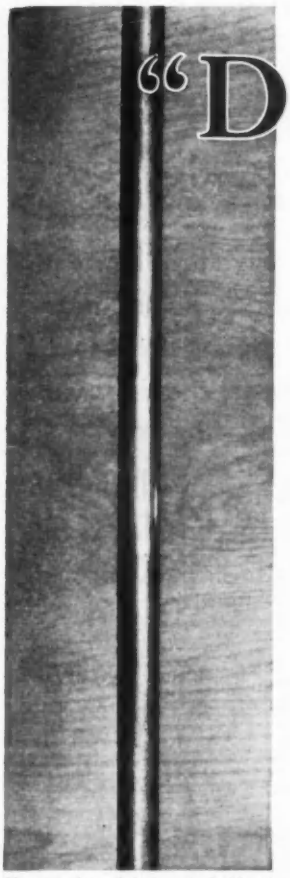
The Waddell pool, northeastern Crane County, is in line for an extension and possible revival of activity as result of Gulf Production Company's E. N. Snodgrass 1, C NW Section 1, Block B-25, P. S. L. Survey, checking somewhat high on structure in drilling below 3140 feet. It had a show of gas at 3125 feet. The northwestern Ector County wildcat of Landreth Production Corporation et al on the Clarence Scharbauer land, C SE SE Section 20, Block 44, T&P Ry. Survey, T-1-N, remains inactive at 3750 feet after cementing seven-inch pipe at 3725 feet, or 15 feet in the lime. Title difficulties now in progress of correction caused the suspension of work on this test, which is checking high on structure and is given an excellent chance of yielding production.

A minor west extension for the lime horizon in Glasscock County was in prospect late last week when W. P. Luse and W. L. Pickens, Dallas, operators, topped the lime marker at 2080 feet with their Turner 1, located in northwest part of NE¼ Section 19, Block 33, T&P Ry. Survey, T-2-S. Drilling was in progress below 2100 feet after cementing casing in the lime. Anticipating a commercial well resulting from this outpost test, Simms Oil Company's L. S. McDowell 1, two locations south and one location west of the above, is drilling below 1500 feet. Luse and Pickens' Lee Brothers 1, NWc Section 20, was rigging up to pump with 1500 feet of oil in hole from lime at 2179-2181 feet. The latter is a south offset to a small oil and water well completed recently by Noble Drilling Company. John I. Moore, Loffland Brothers et al's L. S. McDowell 1, Ordovician lime project, located west by south of the above area, was drilling in gray lime below 3840 feet with cable tools, carrying water from a series of prolific water sands.

Humble Oil & Refining Company has made location for White-Baker 2, C NE Section 4, Block 179, T. C. Ry. Survey, Pecos County, about two miles west of its 9811-foot dry hole on the same ranch. The new test is being drilled to try and perpetuate lease on a large block, and test oil and gas horizons passed up at the 1500-foot and the 1700-foot levels by the deep failure.

McMullen County

San Antonio, Texas.—C. C. Shumway, Inc.'s Shiner Ranch 7, Section 62, Shiner ranch in southern McMullen County, has a sand at 1070-74 feet, which gives promise of production and is being given a drill stem test. The well topped the Jackson at 924 feet, and has the Cole sand at 1059 feet.



Close-up view of 1⅛ in. x 11 ft. Monel Metal polished rod removed from an Oklahoma corrosive well

This is

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of "X" Pool

Monel Metal polished rod

OUTLASTS former type 17 TIMES

After a lease settles down to steady production on the pump, the superintendent who earns his keep does a little wild-catting on economy. If he's lucky, *or experienced,* he quickly finds how to cut costs by using Monel Metal polished rod.

Here's one Oklahoma company's experience: On its No. 15 well, a whole parade of carbon steel polished rods had come to grief. "They lasted from 15 days to 3 months," reads the report.

Then came the big change. The next polished rod stayed in service a total of four years, five and a half months—17 times as long as the best that had been tried.

It was Monel Metal. The photo shows its condition when it "went off tower." (It was dismantled to be exhibited at a Chemical Exposition.)

This isn't any "trick" installation. The well is producing 5 barrels of oil and 472 barrels of water daily. The sucker rod string consists of 1025 feet of ⅞-inch rods and 1040 feet of ¾-inch rods, and the load on the Monel Metal polished rod is 12,000 pounds.

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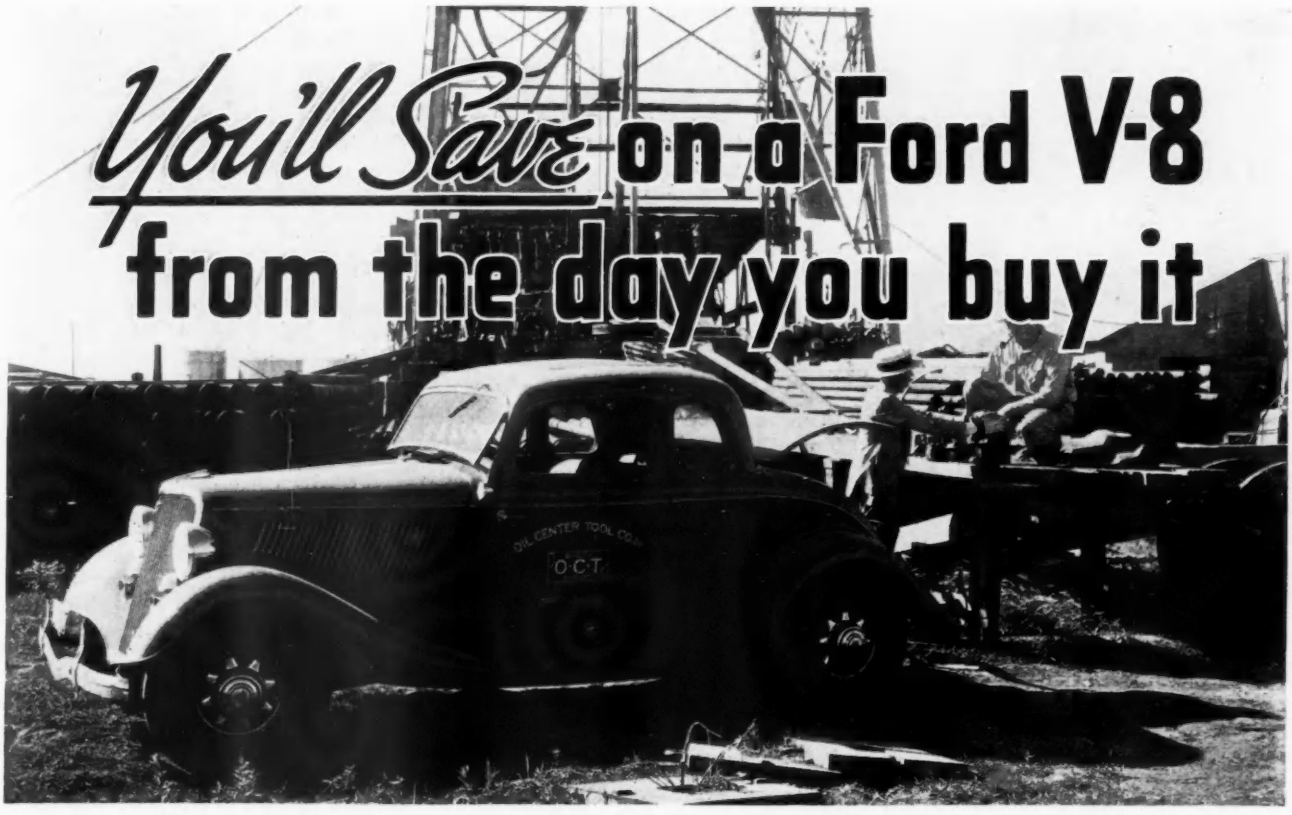

Others as well as salesmen will find the Ford V-8 a profitable investment for oil field use.

Oil men, especially, will appreciate the

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$505 and up, F.O.B. Detroit. Ford V-8 prices are at their 1934 low.

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Ford V-8 valves seldom need grinding. Carbon removal is virtually eliminated. The new Ford V-8 consumes less gasoline and oil than last year's economical Ford. And Ford V-8 parts cost very little.

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Chambers Wildcat Is Running High

Houston.—In Chambers County, across Galveston Bay from the Dickinson area, which was discovered during the past week, Turnbull & Irwin's Sudindrof 1, east of Anahuac in the H.&T.C. No. 67 Survey, was drilling ahead at 7080 feet. Top of the Heterostegina was found at 6810 feet. The Discorbis was encountered at 6369 feet, however this varies 100 feet as estimated by three different companies. This well is marked the most important well drilling in the Texas Gulf Coast area. It is reported to be running about 200 feet high and on this report two of the oil companies have rushed two geophysical crews in to the area. Shell Petroleum Corporation is reported to have paid $9000 for a spread around the test. A large geophysical block is being taken to the south of Sea Breeze by a major oil company.

Deep Conroe Trend Test Drilling Ahead

Houston.—Sun Oil Company's Long 1, 2½ miles southwest of Nome, J. Blair Survey, Jefferson County, was drilling below 8303 feet at the close of the week. This test is the deepest well on the Conroe trend. This wildcat had a small gas blow out in a gas sand found around 8200 feet. The operators have been drilling on this test for the last eight or ten months and have encountered trouble in the hole on several occasions. The well is being cored every foot of the way down. Sun Oil Company has been very active in a large lease play in this county and it is reported that more acreage is being added to their large block.

Hardin County Well Tops Hockleyensis

Houston.—Five miles north of Kountz, Wilcox Oil & Gas Company's Sternberg 1, G. Dorsey Survey of Hardin County, is shut down at 6018 feet in the Hockleyensis. Top of that formation was encountered at 5562 feet. The hole was reported off 10 degrees between 5000 and 6000 feet and after reaming back the hole was corrected to two degrees.

This well is running about normal as compared to Greer & Frazier's Sternberger 1, two miles northwest of Kountz and approximately four miles south of Wilcox Oil & Gas Company's well. Greer & Frazier's well was abandoned some time ago at 6988 feet. It topped the Heterostegina at 3523 feet, Vicksburg from 5189 to 5219, Hockleyensis at 5849 feet, Dibollensis at 6621 feet and the Cockfield at 6770 feet. The elevation of the abandoned test is 77 feet. In the northwestern part of the county, 1150 acres have been turned over to one of the major oil companies. The lessor paid $3500 for this acreage.

Burleson County

Houston.—In the southeast corner of Burleson County around Bear Pond Oil Company's Coulter 1, an interesting lease play is in progress. Recently Crown Central Oil Company took 240 acres at $10 per acre. Bear Pond Oil Company is adding more acreage to its block. City National Bank leased to Bear Pond Oil Company 280 acres for a consideration of $250, $10 per acre if a well is not started on a tract within three months after completion of the Coulter well.

The wildcat on a drill stem test last week from 1375 to 1411 feet showed nothing of commercial value, water with a salty taste and an odor of gas through a three eighths-inch choke in eight and a half minutes. This test was made in the Sparta formation. At the close of the week the test was drilling below 1988 feet. This is a proposed 6000-foot test.

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DEEP WELL DRILLING

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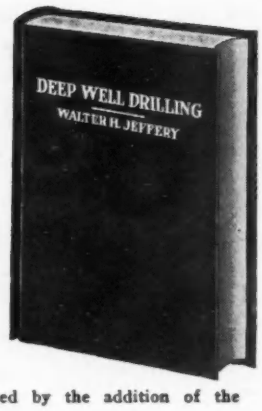

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Preparatory to writing the new book, the author spent weeks in a first hand study of modern methods of drilling by the rotary system, and of completing wells, controlling high pressures and operating wells in the deep fields of California and Oklahoma.

The third edition contains 816 pages, 150 pages more than the second edition, and 452 illustrations, but the price is the same, $6.00.

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» » THE WEEK'S NEWS « «
from All Fields

HIGH SPOTS IN BRIEF

LARGER figures are used in field statistics this week than last as regards both completions and new starts; but initial production recorded was slightly smaller, due mainly to fewer wells completed in Texas. Completions totaled 379, of which 237 were given an estimated initial output of 557,249 barrels. This list of completions tops new wells started, amounting to 348 for the week: however, Texas, Oklahoma and Kansas all show an increase in new starts over wells finished, as did Louisiana where a rush of permits was recorded following a lull incident to a new regulation. (See tables, page 37.)

Oklahoma-Kansas

Oklahoma, which until recently has been very quiet for some time, continued to yield interesting results. In the Edmond pool, north of Oklahoma City, Oklahoma County, a well was completed flowing at the rate of 408 barrels per hour. This brightens materially the prospects of the area. The recent completion of two gusher producers in the Fitts pool, Pontotoc County, is resulting in the commencement of an active drilling campaign.

In Kansas, the discovery oil producer of Barber County commenced making water during its second hour of swabbing. The well will be plugged back in an effort to shut off the water. The Sellens pool, Russell County, may have its fourth producing horizon if a new producer proves to be in the Kansas City limestone.

East Texas

Chances of the Cayuga field, Anderson County, were further dimmed last week when several tests drilled into salt water without showing oil production. Irregular sand conditions in the field are now known to exist. Commercial gas production, however, was obtained in several Cayuga wells that appeared doubtful.

Gulf Coast

A Galveston County, Texas, wildcat has encountered a heavy gas pressure at 7881 feet, which caused a blowout and resulted in a fire that destroyed the rig. Another derrick is being constructed on an adjoining location.

South Texas

A new field along the Pettus trend appears likely as the result of a showing encountered near Dinero, Live Oak County. San Patricio County's new pools, Sinton and Angelita, are proving disappointments, both look like small producing spots with poor sand conditions. The same situation applies to Vanderbilt, the new field in Jackson County. The deep play in Duval County is taking attention away from the heretofore active shallow campaign. One well is preparing to test a sand found at 6354-59 feet. The third completion in the new West Tuleta field, Bee County, is expected to outrank the others. Final results of the first test in the Bonnie View area, Refugio County, to show anything like production are expected at once. A production test of Joe Mills' test, three quarters mile northwest of Cedar Creek field, Bastrop County, resulted in 346 barrels initial flow, opening a new serpentine plug.

North Louisiana

Marl formation production in the Converse field, Sabine Parish, was extended one half mile north by the completion of the fifth well producing from this horizon. Possibilities of finding lower Cretaceous production in the Converse pool received a set-back when two tests proved disappointing. The Rodessa gas field, Caddo Parish, according to indications, will extend into Cass County, Texas.

North Texas

A three-mile extension southwest is in prospect for the deep lime horizon in the old K-M-A field, Wichita County. The extension would carry production into northern Archer County. The third largest well to be found in North Texas was completed last week for 1650 barrels in Young County.

West Texas

A new oil producing field was opened in Andrews County when Humble Oil & Refining Company's wildcat earned a rating of 300 barrels daily. Gulf Production Company's McElroy 103, Upton County, deepest test ever drilled in Texas, is preparing to drill ahead after testing at 10,633 feet.

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CONTROL CHOKES
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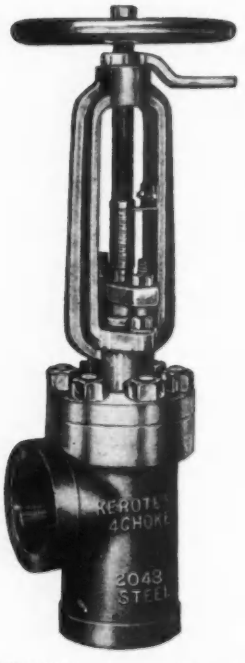
Indeed!



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Extra Heavy design — suitable for 3000 lbs. W. P.

Accurate — Indicator will give you any size of orifice desired in STANDARD FRACTIONS OF AN INCH.

Simplicity — The bolted bonnet enables quick changing of orifice bushing or the needle control.

They are made in all sizes from 2" to 6" to meet every condition and every design of hookup.

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Twenty Four Dry Holes Completed in Oklahoma

Tulsa.—Development in Oklahoma fell below par during the week when scouts reported 20 oil wells with combined initial production of 5645 barrels, two dry gas wells with total initial yield of 1,500,000 cubic feet, three abandoned locations and 24 dry holes, a total of 49 operations which were removed from the active list compared with 38 first reports. Footage in the 49 completions was 99,491 feet, including 72 feet in two old wells drilled deeper. New wells were scattered through 12 of the 22 counties from which reports came.

Completions for the week are shown below:

Company, Well and Location	Init. Prod. Bbls.	Depth
ATOKA COUNTY—		
Paxton & Gray, Norris 1, nw nw nw 19-1s-14w	*	423
CREEK COUNTY—		
J. E. Abbott, M. Allen 2, nw ne sw 12-19n-9e	*	2729
Dean et al, Baunson 3, nw se nw 3-18n-8e	48	2681
C. W. Titus, Casey 4, nw nw sw se 3-17n-8e	35	1339
Magnolia Petroleum Corp., Street 6, se se sw ne 3-17n-8e	256	1414
J. H. Wright, Lewis 4, se se se nw 19-17n-11e	30	1868
GRADY COUNTY—		
English Drilling Co., Heenan-Coe 1, ne se ne 32-3n-7w	*	3504
HUGHES COUNTY—		
Radial Oil Co., Amery 2, nw se nw 28-7n-8e	*	....
JACKSON COUNTY—		
Gypsy Oil Co., S. B. Kelly 1, ne ne ne 10-1n-20w (owpb)	*	2080
KIOWA COUNTY—		
W. E. Bailey & R. E. Johnson, Potts 1-A, cn/1 nw sw 31-7n-14w	*	580
LINCOLN COUNTY—		
Kemp & Blackwell O & G, Cook 1, sw nw ne 23-17n-6e	40	3192
MARSHALL COUNTY—		
Russell & Wham, Ulrich 1, nw ne sw 36-5s-6e	*	734
Centrop Oil Co., Ayers "A" 4, ne ne se 25-7s-5e	24	512
R. A. Godfrey, Burge 5, sw sw se se 25-7s-5e	20	533
McCLAIN COUNTY—		
Denver P & R Co., Newborn 1, cse sw 22-5n-1e	*	6352
McINTOSH COUNTY—		
McGirl et al, Musselem 1, csw sw 8-10n-14e	*	1829
MUSKOGEE COUNTY—		
Young & Adcock, Lowrey 1-A, sw nw nw 21-16n-15e	*	1353
Musselleum, Fee 5, sw se se se 28-15n-18e	25	1098
Foltz, Ingrum 4, ne se ne sw 9-15n-8e	*	1150
NOBLE COUNTY—		
Shell Community, Magney 4, cnw sw 17-20n-2w	135	5287
OKFUSKEE COUNTY—		
Dave Logan, Walker 1, cne se se 13-10n-10e	*	1766
Phillips Petroleum Co., Fish 2, se sw se 25-10n-11e	*	....
OKLAHOMA COUNTY—		
I. T. I. O., Oklahoma State 11, nw nw nw 36-11n-3w	88	6640
Fain Drilling Co., Ownby 1, sw sw se ne 22-11n-3w	¶2-839	6483
OKMULGEE COUNTY—		
C. Peterson, McKinney 1-A, sw ne nw 16-15n-14e	*	1052
Dodson et al, Kinney 2-A, cw/1 sw ne 16-15n-14e	*	855
Colton et al, Massy 1-A, nw nw ne se 20-13n-13e	¶½	1084
Colton-Phillips, Brown 1, se nw ne 20-13n-13e	*	1167
Harmon Oil Co., Culp 1, ne ne ne ne 7-15n-12e	*	613
OSAGE COUNTY—		
Champlin Refining Co., 2, ne nw se 15-25n-6e	*	3256
Carter Oil Co. et al, Munsey 1, sw sw nw 2-25n-6e	666	2886
W. C. Norris, 2, nw nw se 29-21n-11e	40	1980
PAWNEE COUNTY—		
H. D. Hambley, A. Hemming 1, nw nw sw 22-20n-9e	*	2422
PONTOTOC COUNTY—		
Magnolia Pet. Corp., Louis 1, sw sw sw 19-2n-7e	264	4002
Mid-Continent Oil, Milligan 2, sw sw ne 25-5n-4e	500	2584
Breckenridge, Myers 2, se se se 21-5n-6e (owdd)	*	1791
POTTAWATOMIE COUNTY—		
Marydon, Stalmarker 1-A, nw nw se 24-8n-4e	*	4412
Clark, Green 1, sw se nw 15-7n-4e	500	4266
Tex-O-Kan, Hamby 1, nw ne nw 14-7n-4e	*	....
Conley Drilling Co., Vinson 1, ne ne ne 13-7n-4e	520	3983
SEMINOLE COUNTY—		
Carter Oil Co., Riddle 2, ce/1 sw ne se 35-11n-6e	1570	4025
Pure Oil Co., Strothers 1, ne ne sw 26-9n-6e (owpb)	5	4157
TULSA COUNTY—		
Cummings, Bruner 2, cse nw 27-17n-13e	40	2010
Mechling, Chissoe 1-A cw/1 sw ne 13-17n-14e	¶1	1173
J. W. Kuhns, Barnette 1, sw sw nw se 13-18n-14e	*	1339
Misner, Johnson 2, nw nw se 35-18n-14e	*	1403
Clemeshire, Fisher 1, cel se se 7-19n-11e	*	700
WAGONER COUNTY—		
Mars Drilling Co., Berryhill 1, se sw sw 11-17n-15e	¶1/10	1175
Sands Petroleum Co., Childers 1, se nw se 28-17n-16e	*	1051

*Failures; †Junked; ¶Million cu. ft. gas.

Wewoka-Fish Area Expects Two New Wells

Wewoka, Oklahoma.—The Wewoka-Fish area of Seminole and Hughes Counties had two tests that offered promise of being nice wells and one dry hole during the week.

Blackwell Oil & Gas Company's Ferguson 2, C SW NW SW Section 29-7n-8e, on the east edge of the Fish pool, topped Wapanucka limestone at 2953 feet and cored from 2982 to 3016 feet, recovering a good saturated core of Cromwell sand between 3001 and 3016 feet, the total depth. Eight-inch casing was set at 2965 feet and the rig is being standardized. It is a north offset to the company's Ferguson 1 which swabbed 1415 barrels on a 48-hour potential test early in the week. Burke-Greis Oil Company's Wekcha 1, NW SW SW SW Section 29-7n-8e, had top of the Wapanucka limestone at 2994 feet, cored from 3036 to 3050 feet, the total depth, and recovered well saturated Cromwell sand between 3038 and 3050 feet. Cable tools are being

rigged up after cementing eight-inch casing at 3001 feet.

On the north edge of the old Wewoka pool Standard Oil Company of Kansas was plugging to abandon Farmers Trust 1, C SE NE NE Section 28-8n-8e, Seminole County. The log shows top of the Hunton limestone at 3992 feet, Sylvan shale at 4112 feet, Viola limestone at 4210 feet and Wilcox sand from 4302 to 4307 feet, where a showing of water was reported. Six-inch casing was cemented at 3992 feet and the plug drilled to 4088 feet, at which point the hole filled with water. Empire Oil & Refining Company set eight-inch casing at 4025 feet and was rigging up standard tools on Myers 1, C SW SE NE Section 31-7n-8e, approximately one-half mile south of production in the Fish pool. Viola limestone was logged from 4020 to 4042 feet, the total depth.

May Hold Osage Lease Sale Early in September

Pawhuska, Okla.—Request has been made by the Osage Tribal Council for permission to hold a sale of oil and gas leases early in September. Although the definite date has not been announced, if permission is granted by the Department of the Interior, the sale probably will be held on September 12. It is being requested because of possible drainage in the South Burbank and Naval Reserve pools. Leases in the vicinity of the two pools, especially near the former, are expected to bring large prices in view of the several gusher wells recently completed.

Edmond Pool Prospects Brightened by Large Well

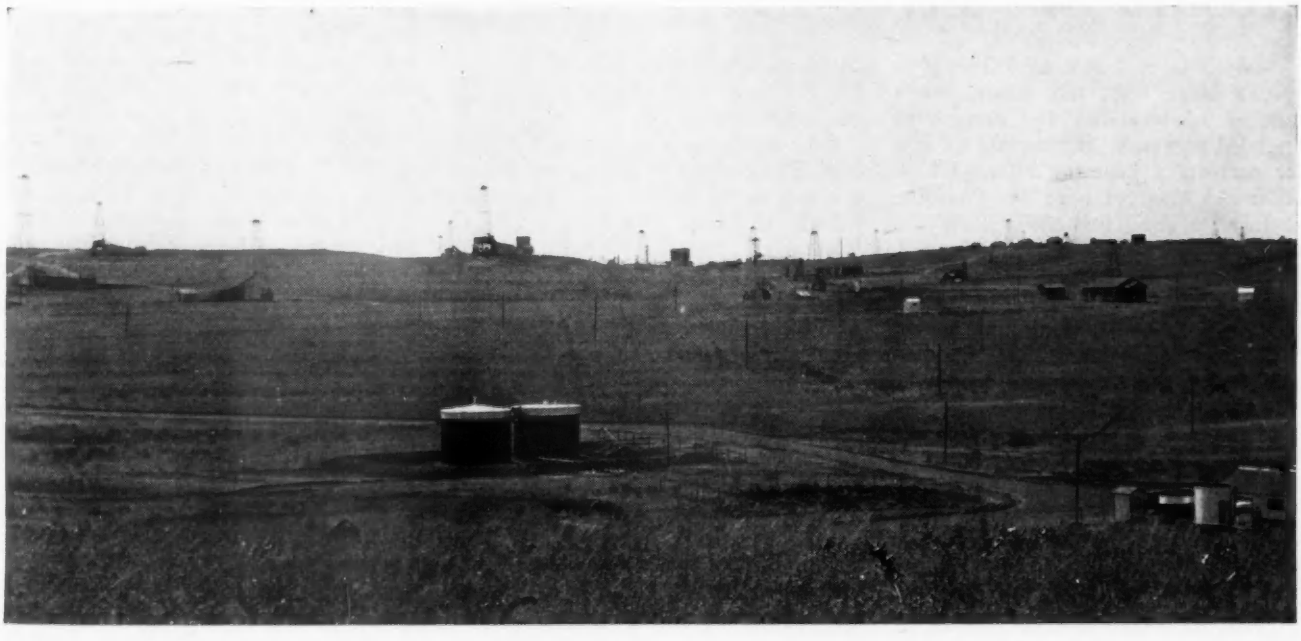
Edmond, Oklahoma.—The Edmond area four miles west of here in Oklahoma County vied during the week for top honors with the Fitts pool in Pontotoc County as Stanolind Oil & Gas Company's and Amerada Petroleum Corporation's Sueneram 1, NEc Section 6-13n-3w, southwest offset to the discovery well, came in flowing at the rate of 408 barrels per hour. Operators encountered top of the Wilcox sand at 6588 feet, 76 feet higher than it was found in the discovery well, and drilled to 6668 feet. Opened at 8:05 a. m., Wednesday, August 8, it yielded at the following rates: 8:05 to 9:05, 455 barrels; 9:05 to 10:05, 405 barrels; 10:05 to 11:05, 384 barrels; 11:05 to 12:05 p. m., 380 barrels; and 12:05 to 12:15, 79 barrels, a total of 1703 barrels in four hours and ten minutes. On the previous day it yielded 1765 barrels in four hours and 20 minutes, making a total of 3468 barrels in 8½ hours on the two successive days.

Mid-Kansas Oil & Gas Company's Dahl 1, CSE SE SE Section 31-14n-3w, west offset to the discovery well, was successful in completing its difficult fishing job, and rotary tools were in the hole. This test had top of the Wilcox sand at 6385 feet, 280 feet higher than in the discovery well, and gave indications of being a big gasser when it blew cable tools up the hole, snapped the drilling line and let the tools fall back. Several bridges have been encountered since rotary tools were moved back on the location. The same operator announced location and started moving in materials for Keeter 1, CNW NW NW Section 5-13n-3w, south offset to the discovery well.

From the information now available it is indicated that a northeast-southwest trending fault cuts the structure, placing the Dahl test on the upthrow side and the Sueneram and Messer wells on the downthrow side. It is surmised that the southern portion of the structure has been displaced to the southwest which would account for the Sueneram being a larger well than the discovery well which is now being rigged up to clean out and drill deeper. The Sueneram well has a penetration of 80 feet and the discovery well 55 feet. Production in the latter probably will be boosted considerably with a greater penetration, if water is not encountered.

Date Set for Oklahoma September Hearing

Oklahoma City.—Petition has been filed with the corporation commission for a hearing on August 30 to determine allowables for the various state pools during



Looking west in the Naval Reserve pool, Osage County, Oklahoma. Activity in this pool has been retarded by proration agreements and a large number of locations remain undrilled. Production is from Bartlesville sand, around 2600 feet.

September. Members of the commission have informally agreed to hold the hearing on this date but formal notices have not been mailed. No change is expected in the federal allocation and pool allowables for September probably will undergo only slight revisions.

Acid Treatment Helps Rice County Producer

Wichita, Kansas.—Atlantic Oil Producing Company's Ott 1, C SW Section 11-19s-10w, completed early in March, 1934, for 1654 barrels initially from Kansas City limestone at 2930 to 3020 feet, was recently acidized and flowed 2909 barrels in 14½ hours. Production had declined to approximately 725 barrels previous to treatment. The well is an east offset to the discovery well in the Brandenstein pool of western Rice County.

Brandenstein 1, C SE SE Section 10-19s-10w, the discovery well, was completed in December, 1933, yielding 1083 barrels from Kansas City limestone at 3014 to 3026 feet. The following month it was deepened to 3044 feet increasing to 130 barrels per hour. The nature of accumulation in the Kansas City formation is indicated by the fact that Brandenstein 2, west offset to the discovery well, was a dry hole at 3337 feet and Schmidt 1, an irregular north offset to the discovery well, was a dry hole at 3338 feet, both latter tests having encountered siliceous limestone with no success.

Sedgwick Play Started Six Years Ago Still Active

Wichita, Kans.—Wednesday, August 8, marked the sixth anniversary of the discovery of oil in the Valley Center pool of Sedgwick County, which brought about the turn toward development of the western portion of the state. On August 8, 1928, Bu-Vi-Bar Oil Company et al brought in the discovery well on the Wright farm, flowing 1700 barrels initially from a depth of 3368 feet. Immediately there followed a drilling boom and in less than a year six pools were in operation in the vicinity of Wichita.

Height of the oil play in Sedgwick County came in 1929 and 1930. During the past three years several small pools have been located but it was not until this year that operators returned actively to the county. In March the Schulte pool was discovered by D. R. Lauck and in May the old Robbins pool was given a half-mile extension by E. B. Shawver on the Brookings Dairy farm. This extension now has five producing wells and two drilling operations. Other development of the year includes a 474-barrel well completed by Bar-Key Petroleum Company in the Kechi district and a new Kansas City lime producer northwest of the Valley Center pool. Present status of the nine county pools is as follows: Valley Center, 66 wells with a daily potential of 3570 barrels; Goodrich pool, 13 wells with a daily potential of 1034 barrels; the Cross pool, two and one-half miles north of Valley Center, one well rated at 20 barrels per day; the Greenwich pool, 37 wells rated at 5963 barrels daily; the Eastborough field, 47 wells rated at 1822 barrels daily; the Robbins pool, 12 wells rated at 2202 barrels daily; the Schulte pool, one well with a potential of 209 barrels; the Kuske pool, one well with a 20-barrel potential; and the Swanson field, one well rated at 474 barrels.

Sedgwick County

Wichita, Kansas.—E. B. Shawver's Schulte 1, NEc Section 13-28s-2w, in the Schulte pool of Sedgwick County, topped chat horizon at 3420 feet, had a small showing of oil at 3444 to 3448 feet, and made two bailers of water at 3457 to 3461 feet. It was being bailed to test after getting a show of gas and an increase in oil and water from 3485 to 3490 feet, the total depth.

Barber County Well Now Making Salt Water

Medicine Lodge, Kansas.—Lario Oil and Gas Company's Whelan 1, C NW Section 32-31s-11w, nine miles northeast of the Medicine Lodge gas field and 26 miles south of the Cunningham pool, in northeastern Barber County, started swabbing at 8:00 A. M., Tuesday, August 7, with 4000 feet of fluid in the hole. The first hour 62 barrels of oil was recovered and the second hour 64 barrels of fluid almost entirely water. The fluid level had been lowered to 1700 feet below the derrick floor. Tools were strung in and open hole found to 4348 feet. Operators will clean out and plug back to about 4365 feet in an attempt to shut off water. Production is coming from sand found at 4348 to 4350 feet and chat horizon from 4358 to 4426 feet. This is the first oil production for Barber County and the test is being closely watched.

Kansas Operators Complete 24 Tests

Wichita, Kansas.—Deepening of three wells in the Nikkel pool of southern McPherson County gave initial production for the state a nice boost, although this production should not be added in total to the reserve since all the wells already were producing. Reports of the week include 18 oil wells with combined initial production of 9414 barrels and six dry holes which involved the drilling of 58,690 feet, including 105 feet in four old wells drilled deeper. First reports, 15 in num-

Large Fitts Pool Wells Result in Active Play

Ada, Oklahoma.—Completion of a second large well, the staking of a number of locations and rumors of intended purchases of interests by major companies, kept the Fitts pool, 12 miles southeast of here in Pontotoc County, in the limelight during the week. J. E. Crosbie et al's Harden 2, C NW SW NE Section 30-2n-7e, the second gusher for the area, flowed 408 barrels in three hours through a one-inch choke on a late gauge. Production is coming principally from the "Bromide" sand, a member of the Upper Simpson formation and probably equivalent to Upper Wilcox sand of the Seminole section. Magnolia Petroleum Company announced four locations, Harden 1, SW NW NE Section 30-2n-7e; Harden 2, SE NE NW Section 30-2n-7e; Harden 1, NE SW NE Section 25-2n-6e; and Harden 1-A, NE SW NE, a twin to the latter location. J. C. Shaffer et al announced location for Norris 1, CSE NW SE Section 25-2n-6e, and Blackstock et al the location for B. Craddock 1, CSW NE SE of the same section.

J. C. Shaffer et al's Harden 1-A, NE NW SW Section 30-2n-7e, the discovery well in the deeper zone, flowed 428 barrels through tubing from 6:30 to 9:30 p. m., Tuesday, August 7. Ed. Moore et al's Weirick 2, CNE SE SW Section 29-2n-7e, the next test scheduled for completion, topped Viola limestone at 3566 feet and was fighting a cave around 3900 feet after flowing 130 barrels from Viola limestone and 17 barrels from Hunton limestone at 3140 to 3473 feet in 24 hours through the bradenhead.

Late in the week it was reported W. A. Delaney, B. C. King, and Sam Miller, co-owners in 42 leases comprising 1960 acres in the vicinity of the discovery well, were negotiating with Stanolind Oil & Gas Company and Amerada Petroleum Corporation on a deal said to involve $4,500,000 in cash.

ber, were restricted to those areas where water is available.

Completions are shown below:

Company, Well and Location	Init. Prod. Bbls.	Depth
BUTLER COUNTY—		
Soco Oil Co., Chaney 1, se se nw 35-24s-3e	*	2759
Brenner 1, cwl e½ se se 26-24s-3e	*	2785
Richmond, Davis 1, ne ne ne sw 24-27s-3e	25	3012
ELLIS COUNTY—		
Stanolind O&G Co., Austin 36, se se ne 36-12s-16w	195	3080
ELLSWORTH COUNTY—		
Gypsy Oil Co., J. Kazisek 2, ne se se 16-16s-10w	200	3393½
Derby Oil Co., Staltenberg 3-A, sw sw nw 22-16s-10w	936	3357
Slick et al, Wilkens 1-B, sw sw sw 18-17s-9w	535	3285
GREENWOOD COUNTY—		
Ackman et al, Gilroy 1-A, ne se ne nw 24-25s-12e	*	300
Kinney-Coastel, Hull 1, ne se nw 3-26s-8e	*	2580
Young, Bitler 1, ne nw ne 2-26s-10e	50	1980
HARVEY COUNTY—		
Mid-Kansas Oil, Duerkson 9, nw ne ne 19-22s-3w	100	3477
Skelly Oil Co., Marten 2, ne se se se 19-22s-3w (owdd)	400	3500
MARION COUNTY—		
Lee et al, Grealey 1-A, ne se se 18-21s-5e	*	2350
McPHERSON COUNTY—		
Shell Petroleum Corp., Griffin 5, sw se nw 14-19s-2w	585	3381
Helmerich-Payne, B. H. Russell 5-C, sw sw ne 23-10s-2w	243	2951
Derby Oil Co., Hamm 1, se se nw 33-21s-3w . (owdd)	1262	3520
Hamm 2, sw sw ne 33-21s-3w (owdd)	1492	3488
Hamm 4, se sw ne 33-21s-3w (owdd)	1644	3470
RENO COUNTY—		
Olson Oil Co., Roberts 5, cse sw 25-23s-4w	322	3371
RICE COUNTY—		
Reserve Petroleum Corp., Heinz 1, ne sw se 8-18s-10w	10	3269
Mid-Kansas Oil Co., B. G. Proffitt 3, ne nw nw 5-20s-9w	433	3232
RUSSELL COUNTY—		
Palmer, Barrell 2, se se ne 21-13s-14w	292	3298
SEDGWICK COUNTY—		
Corn et al, Heck 1, nw nw sw 2-27s-1w	*	3620
Phillips Petroleum Corp., Nolan 1, nw nw nw 21-28s-1e	688	3104½

*Failures; †Junked; ¶Million cu. ft. gas.

Rice County

Raymond, Kansas. — Slick et al's Schurr 5, C NE SE SW Section 21-20s-10w, in the Raymond pool of western Rice County, had siliceous lime from 3303 to 3310 feet, set six-inch casing at 3299 feet and pumped 612 barrels in 24 hours on a potential test. Sinclair Prairie Oil Company's Sharpe 1, C SE NW NE Section 7-20s-9w, in the Sharpe area of Rice County, had top of the siliceous lime at 3261 feet, drilled to 3325 feet where water was encountered and plugged back to 3312 feet. It was then treated with 1000 gallons of acid, using a 200 barrel load. During the first four hours after the load had been recovered it pumped 42 barrels, was shut in three hours and then recovered 97 barrels in eight hours at the end of which time it ceased producing. It was cutting four percent water.

Garden et al have made location for No. 1, SEc Section 3-21s-7w, in the Thodel pool of southeastern Rice County. It is a northwest offset to the same operator's Thodel 1, completed as a 240-barrel pumper from chat horizon at 3360 to 3380 feet in October, 1933.

Sellens Pool May Have Fourth Producing Horizon

Russell, Kansas.—Sinclair Prairie Oil Company's K. R. Sellens 1, SWc Section 25-15s-13w, in the Sellens area of southern Russell County, had pay believed to be Kansas City limestone from 2607 to 2610 feet. Six-inch casing was set at 2610 feet and perforated. The well pumped 165 barrels of oil and 240 barrels of water in 22 hours after being shut down for 10 days. In event that the producing formation is Kansas City limestone it will be the fourth producing horizon for the pool.

Movement of "Hot" Oil Is Retarded By Shipment Curb

(*Continued from page 9*)

riers can accept for shipment, but it is reported that these two products will also be included in a supplemental order.

The restrictions on shipments have not been effective sufficient time to calculate results, although buyers of products from plants alleged to be operating extensively on "hot" oil report it is difficult to clear contracted products. Prices are being advanced by plant operators because of the added difficulties in making deliveries, according to reports.

Allowable production for the field during the week ending August 6, according to figures prepared by the commission, averaged 399,587 barrels daily from 14,150 wells. Crude runs by trunk lines extending from the field averaged 470,730 barrels daily, representing a decline of only about 3550 barrels below the average for the previous week. The commission's estimate on crude deliveries to local plants, including illegal production, was an average of 71,120 barrels daily. However, many plants in the area are reputed to be refusing to reveal information on their crude dealings and plant throughput to agents of the commission, so the above figure is more or less of an estimated, but considered a most conservative one.

East Texas Wildcat Activity Increases

Palestine, Texas.—The Slocum area, southern Anderson County prospect that yielded a good show of oil on a previous test, was included among the six wildcats authorized for the Woodbine sand belt of East Texas during the past week. More wildcats are in store for the district than at any time since a general revival of interest late last year.

Supported by contributions by nearby lease owners, Byrd-Frost, Inc. and Stanolind Oil & Gas Company have made location for their second test in the Slocum area in the northwest corner of the M. Vasacue Survey, about one mile southeast of their abandoned test on the Alice Scott tract, Jas. Crawford Survey. It is about midway between the dry hole and the town of Slocum. Scott 1 created a lease and royalty trading boom for the area last April when Woodbine sand at 5455-5501 feet flowed salt water with a good showing of oil after setting casing. The hole was plugged gack and re-drilled progressively to 5481 feet without results. The presence of a pronounced structure in the area is borne out by geophysical data.

The Normangee Corporation, Houston concern formed by Battaile and Ross Sterling, has started drilling on a wildcat in southwestern Leon County and about 2½ miles northeast of Normangee. It is near the center of a big leasehold, and located 150 feet from the west and 1000 feet from the north lines of the B. F. Henry 125-acre tract, Robert Rogers Survey.

Henderson County, a popular wildcat area in the past with no production to date, is receiving two new tests to augment a pair of wildcats now underway. American-Liberty Oil Company, headed by Clint W. Murchison, Dallas, is moving rig from the company's recent failure in northeastern Freestone County, to explore a block of leases located north of Athens. Murchison is a native of Athens, and in past years has participated in the drilling of six tests, all failures, radiating in all directions from the town. Wm. C. McGlothlin, Corsicana operator, has made location to drill a Woodbine sand test on the R. E. L. Knight tract, C. Armstrong Survey, about three miles west of Trinidad. This block was taken some months ago, based on geophysical surveys in the area.

Search for new producing areas in Rusk County, which bears a big share of the East Texas field, has shifted to the southeast of the latter to the Pine

Hill area. Head Water Oil Company has erected derrick to drill in the south corner of the F. L. Gary 200-acre tract, Jose A. Mora Survey, located about eight miles east of Henderson. The above company was formed by John R. Alford, Rade Kangerga and Frank H. Markey, Henderson.

Green and Wynn have made location to explore a block of 5000 acres centering about two miles southeast of Martin's Mill, Van Zandt County, and on the A. L. Eaton 77-acre tract, Leander Smith Survey. W. E. Brown, Tulsa, and associates are drilling a wildcat several miles to the west on the First National Bank of Edgewood 100-acre tract, M. V. Lout Survey, with several major companies subscribing more than an average amount for lease protection.

Limestone County recently added two additional wildcats, including a test about two miles southwest of Wortham by Don S. Foster, Mexia, and associates in the southeast corner of C. O. Wright tract, Sorrell McAnulty Survey. J. P. Davidson, Wichita Kansas, and others have moved in material to drill J. M. Childs 1, located about three miles north of Mart and in the southwest corner of the J. M. Childs 60-acre tract, Block 3, John Nelson Survey.

The Trinity sand test of R. L. Wheelock-J. L. Collins et al on the I. N. Cerf tract, located on the west flank of the Corsicana-Powell field, was coring below 5370 feet late last week, with some trouble with cavings. It is carrying open hole below surface pipe. Peyton Brothers et al's Jake Steubenrauch 1, which is heading for the same horizon on the west flank of the Mexia field, entered Georgetown lime at 3996 feet, and was drilling below 4100 feet. Commercial production from either of these two deep tests will be followed by an aggressive development campaign on nearby leases, and cause exploration of the Trinity in other fault zone fields now producing from the Woodbine horizon.

Woodbine sand cores showing salt water extracted from the Anderson County wildcat of the Canadian Production Company on the R. M. Jackson-Amerada 387-acre tract, Manuel Rionda Survey, at 4789-4868 feet eliminated it from the list of prospects, although plans are to drill to the 5100-foot level, or the Georgetown lime. It has an elevation of 333 feet. Sun Oil Company's Erskine 1, located in the southwest corner of Anderson County, was considered out of the running when a thick Eagleford shale section was found below Austin chalk at 5248-5556 feet, with an elevation of 202 feet. It was drilling below 5800 feet.

Activity in the Rusk Pool, Cherokee County, now centers on the outcome of Walter L. Goldston et al's Southern Pine 1, N. Newton Survey, since T. J. Wood et al's New Birmingham 2, a southwest offset to their discovery well, proved a failure, as reported last week. It is reported that Wood et al plan to drill a third test in a southeast direction from the producer. Goldston et al were drilling below 3000 feet after being idle because of water shortage.

Additional Failures Prove Cayuga Sand Irregular

Palestine, Texas. — Irregular sand conditions became more pronounced in the Cayuga field during the past week when several tests drilled into salt water without showing oil production, while commercial gas production is assured from several others that were considered doubtful.

Barnsdall Oil Company completed the second dry hole for the field proper when its J. D. Loper 1, NWc 40-acre lease, James Wilson Survey, yielded salt water in drill stem test in Woodbine sand at 4036-4058 feet, or 3763 feet below sea level. This test is an east offset to an oil and gas producer, was originally drilled to 4086 feet last June. It was plugged back to 2616 feet, then sidetracked and drilled a new hole to the sand.

Tide Water Oil Company and Texas Seaboard Oil Company drilled two tests into salt water. H. R. Rampy 1, located near center of W½ of 158.66-acre tract, James Wilson Survey, missed the oil sand in drilling into water at 4082 feet, or 3793 feet below sea level, and has plugged back to 3980 feet to run pipe and complete as a gasser. It is the highest well on the structure, having entered the Woodbine section at about 3715 feet. The same companies' V. W. Bowyer 1, near SEc 300-acre lease, M. H. Johns Survey, omitted a big chuk of the discovery block from oil production when it failed to encounter oil in drilling to 4111 feet, or 3792 feet below sea level. It yielded water on drill stem test at 4053-4111 feet, then plugged back to 3965 feet to complete as gasser after cementing casing. The top of the Woodbine section was logged at 3875 feet. G. W. Ware 1, northern most oil producer, scored a good flow of oil in completing from sand at 4070-4090 feet, or 3765 feet below sea level.

A gas flow rated above 30,000,000 cubic feet daily with a spray of distillate was credited to Tide Water-Texas Seaboard interests' T. Royall-A. Cone 1, northwest outpost, after plugging back from Georgetown lime at 4656-4666 feet to 4060 feet. It is the first test in the area to drill through the Woodbine section. The discovery companies' M. H. Sullenberger 1, which is trying for a south extension to the field in Anderson County, topped the Woodbine section at about 3810 feet, and reported an unusually porous gas sand body below 3870 feet in coring to 3930 feet. It will be carried to the oil horizon, else drill into water then plug back for gas production.

Plugging orders were issued for one of the two tests reported last week as having failed in their efforts to extend the oil producing limits of the field across the Trinity River into Freestone County, while the other is to make a gasser. American-Liberty Oil Company's Trinity Farm 1 was abandoned at 4128 feet, while the Trinity Farm Securities Company's (E. P. Harwell) Fee 1 tested dry on brief drill stem test at 3982-4045 feet, or 3792 feet below sea level. It will be plugged back to try and complete as a gasser from broken gas sand logged at 3932-3980 feet. Although the packer on the formation tester only held for a few minutes, this outpost is credited with having failed to show salt water.

Texas New Starts Total 214 for Week

Austin, Texas.—A total of 214 permits to drill new wells in Texas oil fields were granted by the Texas Railroad Commission during the past week.

East Texas maintained the lead among the districts with 84 permits. There were 34 in Gregg County, 29 in Rusk, 12 in Upshur and nine in Smith County.

The North Texas district was second with a total of 38 permits filed. Archer County continued to hold first place in the district, with a total of 14 permits granted.

There were only 20 permits for new wells in the Gulf Coast area, and Southwest Texas trailed with 15.

In West Texas operators obtained permits for 19 wells, of which nine were in Ward County, while 13 permits were granted in the West Central Texas area.

East Texas Activity Continues Unabated

Tyler, Texas.—Completion of 73 flowing and pumping wells and one dry hole in the East Texas field during the past week conforms with the average number of new locations staked in recent weeks.

Independent companies and individuals continue to set the pace by a wide margin in total number of completions each week, although they control less than 30 percent of the total productive acreage. During the past week the majors were credited with 29 of the new wells.

Revised well spacing rules applied to the field by the Texas Railroad Commission last May 29 supposedly to restrict unnecessary drilling have failed to accomplish this result, owing to the liberal policy pursued in granting exceptions to the regulations after going through the formality of a special hearing. However, permits requiring exceptions are considerably more expensive to procure under the new setup.

Only a small percentage of the property owners in the East Texas field are trying to adhere to a reasonable well density. Many leases confronted with a probable low crude recovery per acre because of poor sand conditions are included among those being over-drilled.

Four additional oil producers were completed last week by Eastern Texas Petroleum Company on the extreme north end of the field, and in an area that produces oil at a sub-sea depth that bottom hole water is found in the field proper. However, this concern overstepped the productive limits in drilling J. N. Foster-Sun 1, SWc 109½-acre tract, James Scott Survey, as the Woodbine sand at 3620-31 feet yielded salt water on drill stem test. It has a sub-sea depth of 3370 feet, or about 50 feet below the average water table for the main field. Foster-Sun 1 is about one mile northeast of nearest production.

Detailed list of completions in the East Texas field during the past week follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Acme Oil Co., M. L. Thompson 3 (10-ac)	10,300	3734
Arkansas Fuel Oil Co., E. M. Beall 7, (79.47-ac)	10,000	3767
Bert Aston Oil Co., J. R. Alford 2-A	3000	3751
Atlantic O.P. Co., I. L. Kinney 22 (336-ac)	5000	3631
Capital Oils, Inc. (Ed. C. Reeves), Frederick 3 (4.96-ac)	500	3610
Deep Rock Oil Corp., W. W. Holland 9 (40-ac)	5500	3725
Hamilton Pet. Co.-Jenkins Bros., Wm. Jobe 14 (109-ac)	5000	3658
Haynes Oil Corp., Clark Lee 13 (73.6-ac)	9500	3647
Humble, Kangerga 46-A (330-ac)	7600	3687
W. P. Moore 5-A (50-ac)	9700	3739
J. H. Silvey 14-A	5800	3723
Mary Smith 3-A (100-ac)	1500	3632
J. W. Turner 26 (400.22-ac)	5400	3774
Jessie White 4 (43-ac)	7700	3745
Heywood White 13-B (132.96-ac)	7500	3715
Hunt Prod. Co., M. M. Barksdale 3 (18-ac)	12,000	3735
K.O.T. Oil Co., S. S. Cook 6 (46.66-ac)	9600	3789
Magnolia Pet. Co., W. W. Holland 5 (17.57-ac)	1200	3715
Mid-Kansas, W. T. Grissom 72 (842.7-ac)	7200	3647
Octo Oil Corp., F. J. Cox-Leonard 2-B (10-ac)	8200	3722
Ortiz Oil Co., D. F. Giles 7 (15-ac)	1200	3738
Geo. B. Ray et al, L. J. Pinkston 7 (49-ac)	7200	3640
Roberts Bros. et al, J. P. & M. Lanham 1 (2-ac)	4000	3781
Sun Oil Co., R. J. Hendon 11 (119.41-ac)	480	3603
Tysco Oil Co., W. H. Frederick 1-B	100	3603
Ward Oil Corp., E. S. Thrash 25 (200-ac)	5000	3791
KILGORE AREA—		
Arkansas Fuel Oil Co., C. Brown 8 (100-ac)	9000	3628
Bell & Graddy, W. Daniels 2 (27-ac)	8500	3560
Champlin-Bass, Inc., J. B. Watson 9 (23.49-ac)	9500	3613
Gulf Prod. Co., M. T. Cole 14 (161.51-ac)	7300	3551
Humble, L. D. Crim 115 (906.98-ac)	7200	3639
L. D. Crim 120 (906.98-ac)	10,000	3658
David Ladd 8-A (38.85-ac)	7300	3691
S. S. Laird 52-B (568.53-ac)	3600	3627
S. S. Laird 57-B (568.53-ac)	7500	3633
Hunter & Rowe, C. L. Still-Gulf 3 (92.07-ac)	250	3660
Invincible Oil Co., W. Williams 3 (14-ac)	7200	3566
Magnolia Pet. Co., W. P. Moore 12 (153.64-ac)	10,400	3695
Neversuch Oil Co.-Magnolia, A. Givens 9 (22.67-ac)	9200	3665
Sun Oil Co.-Texas Seaboard, M. T. Cole 29 (264-ac)	8000	3541
Vireca Oil Corp., M. T. Cole 3 (15-ac)	9000	3562
Weaver-Crim Corp., Ben Laird 11 (82-ac)	9600	3605
LONGVIEW AREA—		
Adams & Lyles, Inc., T. Anderson 11 (62½-ac)	7100	3492
Arkansas Fuel Oil Co., R. S. McKinley 8-A (106-ac)	9300	3593
J. G. Beard et al, J. M. Farrell 5 (43-ac)	6000	3675
W. L. Fuller 7 (73-ac)	225	3730
Deep Rock Oil Corp., B. Jones 11 (61.12-ac)	10,400	3650
Paul Doran et al, C. W. Bingham 2 (3-ac)	9000	3600
Eastern Texas Pet. Co., F. L. Bradley-Sun 1 (41-ac)	10,000	3587
D. A. Fleet 9 (112-ac)	6000	3665
J. N. Foster-Sun 1 (109½-ac)	*	3631
D. F. Smith 6 (611-ac)	9600	3580
D. F. Smith 25 (611-ac)	1000	3587
Faith Oil Corp., J. C. Barrett 12 (140-ac)	3600	3694
Gen'l Crude Oil Co., F. T. Rembert 10 (89.27-ac)	6200	3520
Mary L. George et al, B. F. Crosby 2 (2-ac)	300	3691
Lonnie Glasscock, G. S. Mattox 2 (8-ac)	5000	3598
Harry Hanbury et al, T. L. Bray 8 (19.9-ac)	10,400	3668
Humble, W. C. Mackey 17 (198½-ac)	2000	3572
Eve O'Byrne 10-B (104.2-ac)	5000	3696
H. M. Reeves 4 (28-ac)	9000	3674
I. D. Smith 25 (245.98-ac)	5100	3665
C. H. Lyons-J. K. Wadley, T. J. Dunbar 8 (75-ac)	5500	3618
Magnolia, R. A. Adkins 13 (100ac)	7000	3736
W. H. Peckham & T. B. Medders, L. P. League 2 (12 2/9-ac)	8000	3589
Sells Petroleum, Inc., R. Fisher 8 (63-ac)	11,000	3670
Shell Pet. Corp., G. H. Slaton 12 (123.65-ac)	7100	3676
Simms Oil Co.-Stanolind, Flewellen 25-B (374-ac)	7200	3748
Southland Drl. Co.-W. H. Harrison, E. O'Byrne-Humble 8 (301-ac)	5800	3694
H. N. Tucker-Chas. Pettit-Nachitoches Oil Corp., Sheppard 6 (31.38-ac)	8500	3590
W. F. Turner et al, Alfred Jones 10 (63.84-ac)	9000	3660
Va. Oil & Roy. Co. (W. Logan, Tr.), Harris 4 (60-ac)	75	3538
Yount-Lee Oil Co., V. Calvin 8 (62-ac)	8800	3569
J. D. Davis 11-A (80.68-ac)	8500	3559
ANDERSON COUNTY (Cayuga field)—		
Barnsdall Oil Co., J. D. Loper 1 (40-ac)	*	4058
Tide Water Oil Co.-Texas Seaboard Oil Co., T. Royall-A. Cone 1 (695-ac)	¶30	4666
G. W. Ware 1 (571.65-ac)	3000	4090
CHEROKEE COUNTY (Rusk pool)—		
T. J. Wood-Young et al, New Birmingham 2 (161-ac)	*	5163
VAN ZANDT COUNTY (Van field)—		
Pure Oil Co., A. D. & Preston Clark 2 (9-ac)	500	2938
FRANKLIN COUNTY—		
Humble, Ed. B. Hopkins et al, F. Davis-M. & P. Bank 1 (200-ac)	*	3336
FREESTONE COUNTY—		
American-Liberty Oil Co., Trinity Farm 1 (20-ac)	*	4128

*Failures; †Junked; ¶Million cu. ft. gas.

Gusher Well Found In Young County

Wichita Falls, Texas.—The Jeffery pool deep lime area in east central Young County yielded the third largest oil producer in North Texas last week when Christie Brothers et al's J. R. Jeffrey 2, located on the east line of the Ignatius L. Aud Survey, gauged 1650 barrels of oil flowing natural from Bend lime at 3886-3890 feet. This well is about 3½ miles northwest of Graham, and in an area that was uncovered in January, 1923, by Casey-Mercier et al's Jeffery 1, Phillip Vivien Survey, flowing 50 barrels daily from lime at 4050-4090 feet, with a total depth of 4105 feet.

Absence of flush production in the discovery well killed the enthusiasm of operators in the area, until the Clarco Interests recently completed two wells a short distance to the southeast. Christie Brothers, Wichita Falls operators, completed their Jeffery 1, a west offset to the discovery well, last March flowing 200 barrels daily with some water from lime at 3878-3897 feet, then moved several locations to the northwest in drilling their latest producer, which is also showing a little water, according to reports. Jeffery 2 is exceeded in potential flow only by The Texas Company's two wells on the Les K. Johnson land, Navarro Structure, Western Foard County.

West Texas Has Sixteen Completions

San Angelo, Texas.—West Texas reported 14 flowing and pumping wells and two failures during the past week. An aggregate of 32,430 barrels of new production was added by the former, with a single completion in the Yates field contributing the bulk of the new production.

The two failures were charged to semi-wildcat projects in Ward and Pecos Counties. Sid Richardson et al's Lee Monroe-Shell 1, located in the southwest extension of the Grand Falls district, Ward County, was abandoned in salt water at 2644 feet after passing up several minor oil and gas showings in the regular sandy-lime horizon. Tex-Mex Petroleum Corporation's G. W. Walling 1, Section 59, Block 8, H&GN Ry. Survey, Pecos County, also logged non-commercial oil and gas showings before quitting at 2102 feet.

Completions in West Texas during the past week follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
ANDREWS COUNTY—		
Humble, R. M. Means 1	300	4472
ECTOR COUNTY—		
Skelly Oil Co.-Amerada Pet. Corp., University 4-A	650	3687
GLASSCOCK COUNTY—		
Shell Pet. Corp., R. C. Coffee 2	30	2264
HOWARD COUNTY—		
Eastland Oil Co., O. Chalk-Gulf 1	10	1858
Humble, W. R. Settles 4	360	2384
Plymouth Oil Co., Kloh 11	1145	2360
JONES COUNTY—		
Southern Oil Corp., J. A. Williams 2	55	2545
PECOS COUNTY—		
Cardinal Oil Co., Tippett-Kirby 22-E	100	607
Tex-Mex Pet. Corp., G. W. Walling 1	*	2102
PECOS COUNTY (Yates Field)—		
Mid-Kansas, Smith-Taylor 27	28,485	1345
RUNNELS COUNTY—		
Petroleum Oil Interests, Inc., Brevard 1-B	325	2521
WARD COUNTY—		
California Co., J. F. York 9	250	2524
Farrell & Co., Bennett-Pure 4	410	2550
Gulf Prod. Co., Hutchings 30	210	2760
Sid Richardson et al, Lee Monroe-Shell 1	*	2644
WINKLER COUNTY (Scarborough Field)—		
Sid Richardson et al, Scarborough-Skelley 6	100	3027

*Failures; †Junked; ¶Million cu. ft. gas.

Delay in Connections In Panhandle Area

Pampa, Texas.—Completion of nine oil producers and one dry gasser in the Texas Panhandle during the past week added 3145 barrels of new production, while the gas yield of the district was boosted 89,000,000 cubic feet. These new wells were completed in Carson, Gray and Wheeler Counties.

A surplus production of crude exists in some sections of the Panhandle, and a few operators are encountering delays in obtaining pipe line connections and market outlets. The district has been exceeding its daily proration allowance by 3000 to 5000 barrels daily for more than a month, while a heavy quota of new wells each week add to the excess, since new wells are permitted to flow or pump their maximum output for five days in establishing potential rating.

Texas Panhandle completions for the past week follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
Herrogan Oil Co., L. C. McConnell 2	185	3300
Skelly Oil Co., H. Schaffer 33-W.	¶45-40	3094
GRAY COUNTY—		
Ben Golding (Gold-Pool Oil Co.), D. N. Massey 1	¶30	2768
Humble, Wm. Jackson 6	405	3115
Sinclair Prairie, Combs-Worley-Moody 5	1215	2960
Skelly Oil Co., L. H. Webb 10-A	70	2670
The Texas Co., W. W. Harrah 6	140	3250
WHEELER COUNTY—		
Humble, J. P. Koons 3	¶6-210	2363
Magic O&G Co., J. P. Koons 3	¶8-75	2556
Mid-Continent Pet. Corp., J. S. Carwile 6	805	2440

*Failures; †Junked; ¶Million cu. ft. gas.

Deep North Texas Pool Extended Three Miles

Wichita Falls, Texas.—A three-mile southwest extension for the deep lime horizon in the old K-M-A field, Wichita County, was in prospect when C. A. Everts Drilling Company, Dallas, logged 22 feet of oil and gas saturated sand in drilling its Kemp & Kempner 1, northern Archer County wildcat, to 3911 feet. Situated near the center of a 2200-acre leasehold controlled by the above concern, this wildcat is 660 feet east and 1351 feet south of the NWc Block 5, K.W.V.F.L. and F. Peterswick Survey. A string of 6⅝-inch pipe was cemented at 3884 feet, or five feet above the pay zone. An actual test of the producing horizon, which checks about level with producers in the field proper, was delayed last week to cement a split joint of casing caused by driving a lost swab to the bottom.

Second oil producer for the discovery lease of the K-M-A field's deep producing zone was completed last week when the Deep Oil Development Company's S. I. & M. H. Munger 2, Section 30, Block 14, K.W.V.F.L. Survey, pumped 150 barrels daily after being shot with 150 quarts of nitro at 3864-3898 feet. It was plugged back from 4001 to 3899 feet to shut off bottom hole water. These deep wells are producing from the Strawn, which yields high gravity oil and a limited volume of gas from both sand and lime section.

Completions in North Texas continued at a low level the past week, with only 33 tests finished. There were 17 failures, and 16 oil producers. The latter accounted for a combined initial output of 2030 barrels daily. Archer County reported a twin well completion by W. H. Peckham and Tom B. Medders, who have proven up a shallow oil sand above the regular saturated lime horizon on the Wm. Justice-Strip lease, W. H. Patton Survey A-345. Justice 4-B pumped 60 barrels daily after treating lime at 1094-1103 feet with 1000 gallons of acid solution, while Justice 5-B, located 24 feet west of the above pumper, yielded 22 barrels initial from sand at 864-899 feet.

Completions in North Texas during the past week follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
Bridwell Oil Co., Falls County 10-E, blk 20	25	1115
Fain-McGaha Oil Corp., W. Ferguson 19, blk 2	20	654
N. D. Goldsmith et al, J. L. Anderson 1, blk 19	5	1438
Jack Grace et al, B. C. Andrews 4	30	946
Gray Drl. Co., Ferguson 8, blk 2	*	674
J. Hamer et al, J. Longley 4	*	991
J. Longley 5	300	963
Reese L. Hayes et al, G. B. Hamilton 1, blk 5	*	1205
Massey & Featherstone, B. C. Andrews 7	10	979
Maxson & Panhandle Ref. Co., F. C. Green 25-B	450	1087
R. C. Parker et al, Mrs. J. Robertson 1	*	701
Peckham & Medders, Wm. Justice 4-B	60	1103
Wm. Justice 5-B	20	899
Perkins-Cullum Oil Co., Falls 14-C, blk 5	225	1169
Petroleum Producers Co., J. T. Richardson 4-E, blk 1	250	1244
Russell & Wilson, H. O. Prideaux 16	10	682
The Texas Co., J. Cuba 2, blk 5	95	1404
D. M. Harris 1	*	1416
COOKE COUNTY—		
J. K. Wells et al, E. Bezner 1	*	1975
JACK COUNTY—		
Brownfield Dev. Co., W. L. Shields 1	*	490
Hunt & Howell, L. M. Craig 1, blk 2	*	650
MONTAGUE COUNTY—		
Geo. L. Pace et al, H. L. Dennis 1-A	*	1854
Seitz-Comegys & Seitz, B. LaForce 1	*	2025
THROCKMORTON COUNTY—		
The Texas Co., Z. R. McWhirter 1, sec 3020	*	1404
WICHITA COUNTY—		
Deep Oil Dev. Co., Munger Bros. 2	150	4001
WILBARGER COUNTY—		
Consolidated Oil Co., Waggoner 7-T, sec 35	200	1873
W. T. Waggoner, Jr., et al, Waggoner 5, sec 22	*	1931
YOUNG COUNTY—		
Verne M. Clopton et al, E. R. Carter 1, sec 1594	*	1265
Nash-Windfohr-Thompson--Bierman, Graham-Vick 13	180	2596
Regal Oil Co., J. P. Atchley 1, sec 226	*	1020
Sams & Meyer, R. C. Stringer 1, sec 252	*	674
Leo Sellars et al, Nora Finch 1, sec 33	*	750
The Texas Co., J. C. McDonald 2	*	611

*Failures; †Junked; ¶Million cu. ft. gas.

Calhoun County

San Antonio, Texas. — Continental Oil Company is having some trouble with its deep wildcat in Calhoun County, being drilled on American National Realty Company land between Seadrift and Port O'Connor. Drill stem was stuck at 5870 feet and now the 8¼ inch pipe run over the drill stem to circulate seems to have stuck below 400 feet. Oil is being used to circulate. This well is projected to at least 8000 feet.

New Field Along Pettus Trend Is Very Likely

San Antonio, Texas.—Lion Oil Refining Company's McNeil 1, west of the town of Dinero in Live Oak County, encountered a sand at 4370-76 feet, which showed 300 feet of high gravity oil in four minutes with considerable gas pressure, and casing is being run. It looks like the opening of another new field along the Pettus trend.

The showing is in the Hockleyensis section of the Jackson series and is about midway between the points where the Cole and Government Wells sands are found in the Mirando district. It is about 900 feet above the Pettus sand, which is producing in the Mount Lucas field, two miles to the southeast of this well.

The well is located 1320 feet from the southwest line and 1370 feet from the southeast line of Tract 9 or 4600 feet from the southwest line and 321 feet from the southeast line of the James Curry survey.

The majority of the block is held by Lion Oil Refining Company, although some of the acreage was sold before the well was drilled. The close in stuff likely will be drilled within the near future if the new test proves productive.

Humble Oil & Refining Company is reported to have purchased 700 acres out of the Dick Dobie ranch just south of the test for a reported price of $30 per acre. This purchase, made on the basis of the drill stem test, is indicative of the possibilities of the new test.

The contract for the drilling of the well, originally projected to 5500 feet, is held by Trinity Drillers, Inc., of San Antonio.

Duval County Deep Play Attracts Attention

San Antonio, Texas.—Duval County's deep tests are attracting attention, and indications are that the play will shift from the heretofore very active shallow drilling to the lower horizons.

Sun Oil Company's Moreno 1, nine miles south and a little west of San Diego, and five miles east of the Piedras Pintas area, and in Section 540, encountered a sand at 6354-59 feet, which had a good odor, and a drill stem test is being run. If it materializes into a producer, it will be the deepest production anywhere in South Texas with the exception of Refugio. This well topped the Jackson at 4940 feet, which would likely put this sand below the Cockfield in the Yegua, producing on the southwestern side of the county at 3400 feet.

Magnolia Petroleum Company is below 5300 feet in Duval Ranch 1, northeast corner Section 58, about a mile west of the proven area of the Government Wells field.

Over on the Driscoll ranch in the Driscoll field, southeast of Government Wells and southwest of the Sun deep test, Continental Oil Company's R. Driscoll Estate 2-A, is drilling at 4340 feet on a projected deep test. This well is 1000 feet north of Driscoll 10, a 30,000,000 cubic foot gasser in a 2480-foot sand. The well is in Section 448. It had a sand 3834-43 feet which developed 22 fourbles of salt water and a little gas on a drill stem test. This likely was in the Pettus sand. Another sand, classified as in the Yegua, showed salt water and gas at 4058-90 feet. It previously had shown for a gasser in the Government Wells sand, topped at 3443 feet.

Third West Tuleta Well Appears to Outrank Others

San Antonio, Texas.—The third well to be drilled in the new West Tuleta field of Bee County, appears to be the best producer. This is based on a drill stem test of seven feet of sand at 3906-13 feet. It showed 500 feet of oil and 90 pounds pressure in 10 minutes. The well is about midway between the discovery well on the southwest, which is a gasser spraying oil and the second producer on the northeast, which is producing with the aid of gas jets. The location of the well is NW SW SE Section 5, Hall subdivision.

Walton and Heard have four locations on the 40-acre tract, Circle W. Oil Company was reported to have made a location offsetting the most northeasterly producer on the south, Edwin M. Jones is moving in and rigging up for Robinson 1, direct north offset to the discovery well, and several other operations are expected to be started within the next several days.

In the Caeser area in the extreme northern portion of the county and near the Karnes County line, Caeser Oil Company's Pullin Estate 1, north of the C. E. Pullin 1 gasser of the same company, is in process of completion, having the sand at 3031-39 feet. It looks like at least a gasser spraying oil and may make an oil well, the first in the immediate area. Falvey et al's Gardner 1, southwest of the well, is shut down at 3064 feet, and is said to be waiting the completion of a deal for the sale of the gas. If a deal is made, this well likely will be plugged back from its present level to a sand at 3008-15 feet and finished as a gasser, otherwise, it may be carried deeper.

Vanderbilt Field Tests at 6000 Feet Without Show

San Antonio, Texas. — Two wells have reached depths of 6000 feet without encountering encouraging showings in the Vanderbilt field of Jackson County. Phillips Petroleum Company's Drummong 1, 4200 feet west of the discovery well, is at 6012 feet and is changing to 4½-inch bit to drill deeper. Same company's Simon and Seidel 1, northeast offset to the discovery well, is at 6000 feet, where an electric formation test was run. It showed a possible producing section just below 5800 feet and the well will be tested at that level. Casing is to be run. The company's test on the townsite of Vanderbilt is drilling at 2400 feet.

No less than a dozen locations have been made in the townsite by independents holding as small as a single lot and should production be established there, it apparently will bring about an immediate drilling boom. The Texas Railroad Commission has been restrained through court order from preventing close up drilling in this field where the property is owned by different fee owners.

San Patricio New Pools Are Disappointing

San Antonio, Texas.—Discouraging results during the past few weeks have tended to cool the interest in San Patricio County's two fields, which now look like small producing spots with poor conditions in which to produce.

Atkins and O'Neil and Continental Oil Company's E. Welder 1-A, Villareal grant, block 2, 2000 feet west of the Angelita discovery well, has been abandoned at 6011 feet, while E. Welder 2, a direct southeast offset to the discovery well is having trouble with salt water at 5383 feet. High gas-oil ratio and water are real problems in this pool, where four tests have netted only one producer, that being the first one.

In the Sinton field to the north, Plymouth Oil Company got a second producer in the 5450-foot sand. It is Welder 2-A, located 1320 feet due east of the discovery. It logged a little lower than the discovery well, but ended up as a gasser spraying about 60 barrels of high gravity oil per day. The well originally went to 5548 feet, plugged back to 5300 feet, sidetracked and recored the sand, stopping at a new total depth of 5431 feet. It topped the sand at 5427 feet.

Petrol Corporation's Welder 1, Garza survey, 6200 feet northwest of the

discovery well, has plugged back from 6000 feet to 5200 feet and will sidetrack and re-drill to the sand at 5405-35 feet, indicated on an electric formation test.

New South Texas Fields Report Surprise Failures

San Antonio, Texas.—New fields are contributing the bulk of producers being completed in South Texas at this time. These areas, however, are offering disappointment in many cases, virtual offsets to producers being quit as failures. They follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
BASTROP COUNTY—		
Joe Mills, Lytton 1, 1044 ft nel & 1005 ft sel of J. A. Navarro sur.	346	1630
Ogden & Reed, C. L. Riddle 1, J. Gray sur	35	2314
BEE COUNTY—		
Howeth & Swiger, M. Schramm Estate 1, 2322 ft wl and 466 ft nl 150-ac tract, Hugh O'Brien sur..	*	5509
DUVAL COUNTY—		
Bridwell Oil Co., Schoolfield & O'Byrne 1, 330 ft nl & wl blk 13, sec 78	*	2434
Humble Oil & Refining Co., Paul White 32, sec 249	600	2261
Paul White 33, sec 249	¶10	2260
Magnolia Pet. Co., Duval County Ranch Co. 29, sec 208	50	2316
Tankersley 3, sec 46	50	2298
Russ Petroleum Corp., C. W. Hahl 8-A, sec 46	240	2304
Sun Oil Co., Weiderkehr 66, sec 359	600	2285
Thomas & Traver, Weil et al 1, sec 130	*	2510
LIVE OAK COUNTY—		
Unit Oil Co., A. Terrell 1, 1750 ft sl & 320 ft wl of tract, Christopher Scanlon sur	*	1503
NUECES COUNTY—		
Midland Oil Co. (Ed Buckley) Noakes 1, begin at center of R R bridge, go s along re 950 ft, thence at right angles 1825 ft	*	6009
REFUGIO COUNTY—		
Atlantic Oil Prod. Co. & Stanolind Oil & Gas Co., J. M. O'Brien 4-G E. H. Winfield sur	129	4390
Humble Oil & Ref. Co., Fannie Heard 4, M. J. Ximenes sur	933	5944
Nesral Oil Co. & Baymore, V. E. Heard 1 (2), M. J. Ximenes sur	*	6100
SAN PATRICIO COUNTY—		
Atkins, O'Neil & Continental Oil Co., E. Welder 1-A, V. T. & Pedro Villareal grant, e cor blk 2	*	6011
Plymouth Oil Co., Welder 2-A, Portillo sur, pb 5431 ft	¶30-60	5548
STARR COUNTY—		
R. S. Bolling, M. M. Garcia 1, 2047 ft sl & 4467 ft wl, sec 918, 12 mi ne Rio Grande City	*	2507
Jim Cloud, Inc., J. Rodriguez 1, 330 ft sl & el share 35, por 88..	*	160
Great Plains Oil Co., Sanches 1, 660 ft wl & 330 ft sl se nw sec 344..	*	3612
Smith-Tex Oil Co., Starr County Cattle Co. 1, 330 ft nl & wl n blk 24, por 89	*	3610
VICTORIA COUNTY—		
Feltex Oil Co., Herman Dietzel 1, Manchola gr.	*	3650
Humble Oil & Ref. Co., Mitchell 2, 6500 ft nwl & 700 ft swl 5000-acre tract, P. Benavides sur	*	5280
WILLIAMSON COUNTY—		
G. L. Rowsey, Reiger 2-B, 500 ft nwl & 3150 ft sel of Peter Cartwright sur	*	1171
H. Sladek 4-A, H. White sur	*	1058
ZAPATA COUNTY—		
Texas Co., Whitehead 50, Cerrito Blanco grant	50	1233

*Failures; †Junked; ¶Million cu. ft. gas.

Bastrop County Serpentine Discovery Is Good Well

San Antonio, Texas.—Joe Mills' Lytton 1, three fourths of a mile northwest of the Cedar Creek field, Bastrop County, has definitely opened a new serpentine plug. The well is flowing 34.8 gravity at the rate of 346 barrels per day, or 14 barrels an hour from a depth of 1630 feet. It topped serpentine at 1507 feet, but it was said to have been dry to 1628, where the formation was very porous and well saturated. Casing was set at 1490 feet.

Down in the North Dale field, Ogden and Reed have had a little success with an acidation project in C. L. Riddle 6, Joshua Gray survey. The top of the lime was recorded at 2286 feet, top of the chalk at 2296 feet, total depth 2314 feet and casing set at 2154 feet. It is making 35 barrels per day on pump.

Bonnie View Well Is Ready to Test

San Antonio, Texas.—Final results of the first test in the Bonnie View area of Refugio County to show anything like production were expected over the week end. Holland Oil Company et al's Peck 1 had run tubing and was preparing to swab at a new depth of 5348 feet. It previously had been drilled to 5348 feet, plugged back to 4500 feet, sidetracked and drilled into the sand again, topping it at 5330 feet.

This well is located in the northwest corner of the southwest quarter of Section 24, E. Lopez Survey, and is only 200 feet east of Dixon et al's Peck 1, which was abandoned several years ago at 4012 feet.

Coletto Creek Discovery

San Antonio, Texas. — Nutex Oil Company's Nutex 1, R. Manchola Grant, in a new shallow sand in the Coletto Creek field, is a fair oil well, but is showing considerable gas. Separator is being installed and a test likely will be made over the week end. It is said to be spraying between 50 and 60 barrels of oil per day and is showing a casing pressure of 765 pounds and a tubing pressure of 880 pounds. The sand is at 2204-9 feet.

Hidalgo County Strike Is Setting Casing

San Antonio, Texas. — Davis and Harrison's Mrs. L. George, tract 13, Porcion 41, less than a mile southwest of Sam Fordyce in Hidalgo County, and about the same distance north of the Mexican border, has the earmarks of making a tremendous gasser at a reported depth of 4136 feet. It ran wild on a drill stem test, but was brought under control. The pressure rocked up to 1800 pounds within a short time. Casing is being set.

New Producer Is Finished at Clay Creek

Houston.—In the Clay Creek field of Washington County Sun Oil Company finaled its Janner 9, for 150 barrels of pipe line oil per day as a gas-lift producer from 1284 feet. The well is located in the J. F. Perry League Survey. Drageger 2, operated by the same company, on a drill stem test from 1160 to 1205 feet, had a showing of oil. On the second drill stem test from 1302 to 1327 feet, the seat failed to hold and it is being cored ahead below 1374 feet. This well is also located in the J. F. Perry League.

17 New Coast Wells Initial 9830 Barrels

Houston. — Completions along the Texas Gulf Coast during the past week totaled 23 and of that amount 17 resulted in producing wells with an initial production of 9830 barrels of oil per day. There were six failures reported.

Completions along the Texas Gulf Coast for the past week are as follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
BARBERS HILL—		
Mills Bennett, Gulf Fee B-3	357	4717
Wilburn 9	567	4453
BLUE RIDGE—		
Mills Bennett, Luscher 1	125	4492
BOLING—		
Allied Mineral Corp., Farmer 1	720	4399
CLAY CREEK—		
Sun Oil Co., Janner 9	150	1284
CONROE—		
Humble O&R Co., Keystone Mills 26	1992	5127
So. Tex. Dev. Co. A-69	1039	5170
The Texas Co., Moody 18 (wo)	432	5080
Tide Water Oil Co., Dean 8 (wo)..	192	5139
Sun Oil Co., Keystone Mills 14	1920	5129
ESPERSON—		
General Crude Oil Co., Davis 8	84	4112
HULL—		
Hannah Oil Co., Hannah 1-B	*	2000
Republic Prod. Co., Dolbear 155	150	2351
Sun Oil Co., Carr Fee 8	279	5053
HUMBLE—		
The Texas Co., Stevenson 48	*	2264
MANVEL—		
The Texas Co., Boff 2	108	5168
Houston Oil Field Association 1..	*	4244
MARKHAM—		
Hamil & Hamil, Hudson 1	*	3855
RACCOON BEND—		
Humble O&R Co., Sherrod 6	744	4151
TOMBALL—		
Humble O&R Co., Petrich 2	570	5569
Sun Oil Co., Metzler 1	408	5559
FT. BEND COUNTY—		
Gem Oil Co., Farmer 1, s of Needville, R. Hodge sur	*	6110
MONTGOMERY COUNTY—		
Humble O&R Co., Anna M. Platte 1, 3000 ft e of Steen's well, Wm. Barker sur.	*	6085

*Failures; †Junked; ¶Million cu. ft. gas.

Galveston County Wildcat Strikes Heavy Gas Pressure

Houston. — Humble Oil & Refining Company's Maco Stewart 1, in the Dickinson area of Galveston County, was destroyed by fire last week at 7881 feet. The well is located about three miles east of the above town, between the Gum Bayou and San Leon prospects in the J. Sellers Survey. A new rig will be erected on another location.

The Maco Stewart well topped the Discorbis at 6467 feet, Oligocene at 6538 feet, Heterostegina at 6786 feet, Marginulina 7009 feet, and the Frio sand which was topped at 7710 feet and at that depth the company had a showing of gas from 7710 to 7808 feet. While preparing to core ahead to 7881 feet the well caught on fire and destroyed the drilling equipment. The gas was estimated to have had a pressure of 3500 pounds along with a spray of distillate. The well bridged over and extinguished itself. Sand and shale was logged from 7778 to 7782 feet which carried oil. This well is the discovery well for the area and is expected to result in several new locations being announced.

C. R. & G. Drilling Company's Spoor 1, three miles south of Dickinson, in the W. K. Wilson Survey, was reported to be moving back in to drill its well deeper. The well has been shut down for some time at 6577 feet. The well was running normal as compared to the Humble Oil & Refining Company's well. The field is operated by Pure Oil Company and Humble Oil & Refining Company. A heavy lease play is now in progress in the area.

Cockfield Is Sought In Colorado County

Houston. — Quintana Oil Company's Olmstead 1, east of Rock Island in the M. Batson Survey of Colorado County, was drilling in shale at 3869 feet, after finding the Fleming from 1014 to 1554 feet, Catahoula from 1554 to 2129 feet, the Fossil zone from 2129 to 2190 feet, and Vicksburg at 3377 feet. It is reported Gulf Refining Company gave the Quintana Oil Company half interest in its 3000-acre block to drill this well.

In the Garwood area of Colorado County, Colye Concord's Nelson 1, the discovery well for the area is being drilled deeper. At the close of the week the bottom of the hole was 4190 feet. This well came in July 17, 1932, for 80,000,000 cubic feet of gas with a spray of high distillate from sands found from 4021 to 4052 feet. The producing horizon is Frio sand of the lower Oligocene. The Cockfield sand was found productive in this field, which was found from 6140 to 6203 feet, and one well produced 1500 barrels of 43 gravity oil before it went to salt water.

Danciger Oil & Refining Company's Raver 1, in the Garwood area and in the BBB&C No. 1 Survey, has been abandoned temporarily since the middle of last year. The bottom of the hole was 4525 feet. Since that time activity has been on the increase and acreage selling above $10 per acre. One operator has a 5000-acre block and is offering spreads for $12.50 per acre and drill a well to the Cockfield sand. This area will be interesting to watch as there has been only one well to produce from that formation.

Southwest Raccoon Bend Flank Test Seeks Cockfield

Houston. — Humble Oil & Refining Company's Gutoskey 7, in the southwest part of the field, 466 feet from the north and east line of 150-acre lease and approximately half mile north of the discovery well for the Raccoon Bend field of Austin County, was drilling below 5384 feet, making this well one of the deepest in the field. The company is searching for Cockfield production in this part of the field. Heretofore production has been from the Gutoskey sand of the Whitsett zone found from 3100 to 3300 feet. The discovery oil well produced from 3259 feet.

Cockfield production is proving prolific in this field but has produced only on the east flank of the field and Gutoskey 7 is an effort to establish the production on the southwest flank. If the Conroe pay sand is found in the present deep test, it will make the territory between it and the Cockfield production on the east flank look promising for the pay horizon. The distance between the two areas is approximately one and a half miles.

From 2231 to 2240 feet the well cored a sand that showed oil and gas with a salty taste, from 3284 to 3294 feet another sand was cored that showed oil, and on a drill stem test from the latter depth, 30 feet of mud was uncovered with a salty taste. Quarter-inch choke was used on top and bottom and the tester was open 30 minutes.

Humble Oil & Refining Company's Sherrod 6, W. C. White Survey, Raccoon Bend field, was completed for 744 barrels of pipe line oil per day through a three eighths-inch choke from 4151 feet. This well is located on the east flank of the field and is a Cockfield producer. From 3138 to 3146 feet, a sandy shale was encountered showing oil, 3147 to 3156 feet a sand showing oil was found, 3409 feet an 18-foot body of sand was uncovered which contained oil.

Recently Humble Oil & Refining Company purchased one eighth royalty in the 268-acre tract in the W. C. White Survey for a total cash consideration of $20,000.

New Test Started In Van Vleck Area

Houston. — Skelly Oil Company is rigging up on its Cobb 2, in the Van Vleck area of Matagorda County and will spud in shortly. Cobb 1, which also is owned by Skelly Oil Company has produced approximately 1500 barrels of 48 gravity (corrected) oil since discovery. The oil is being produced through a 17/64-inch choke on the bottom in order to eliminate freezing conditions at the well head. It is recalled that several chokes were used on this test and the operators experienced some trouble with freezing of the chokes. The well will be pinched in and the choke will be reduced to a smaller size so as to supply Cobb 2 with fuel. The distillate produced will be sold to Crude Oil Company of Saskatchewan, Canada. The distillate is a light green color. Skelly Oil Company is laying a two-inch line to Chalmers, Texas, where the distillate will be shipped away in tank cars. The discovery well is now making approximately 55 barrels per day.

On the new Murk Hill prospect, two miles north of College Point and five miles southeast of Citrus Grove, it was reported that acreage is selling for five dollars per acre on what is believed to be the top of a structure. The area has been worked by several oil companies in the past year.

In the Markham field of Matagorda County, Rio Bravo Oil Company's Sisk et al 1, H. Haddon survey, had a good showing of gas at 3200 feet. This field has been held up in its drilling for the past few weeks due to the storm that hit there. On the east flank of the field, 800 feet, Powers Production Company has made location for Northern Irrigation Company 1, I. & G. N. Lot 5, Block 6, Survey, and the derrick is being built.

Harris County Test Is Drilling Deeper

Houston.—Loring Oil & Gas Company's Westmoreland Farms Development Company 1, 1½ miles southwest of Bellaire in Harris County, was coring ahead at the close of the week below 6863 feet after topping the Jackson at 6730 feet. The well was recently abandoned at 6031 feet but the operators decided to carry the well on down and test the lower formations. The well is reported to be running about normal. Elevation is 84 feet. Vicksburg was encountered at 6212 feet.

Texas New York Development Company's Ralston 1, 12 miles east of Houston in the J. W. Moody Survey, was shut down at 1535 feet. It is reported that the operators are clearing titles. One of the

major oil companies is reported paying $8000 for 350 acres around this wildcat. The company has to pay $3500 on approval of titles and $4500 on completion of the 5000-foot test. Leasing has been very active around this test and some of the acreage is going for four dollars in revenue stamps.

A new wildcat location has been made in Harris County by Garner et al, who will drill a well two miles northeast of Hockley in the J. W. Clifton Survey. The well will be known as A. E. Hager 1, 150 feet from the south line and 150 feet from the east line of 136.8-acre tract in the above survey. The operators now have a derrick on the ground.

General Crude Oil Company's Rorick 1, six miles south of Cypress in the J. C. Ogburn Survey, was drilling in lime and shale below 5322 feet. This well has become a mystery well as all the information of the wildcat is being withheld.

Another Splendora Test Abandoned

Houston. — Humble Oil & Refining Company's Anna M. Platte 1, 3000 feet east of Steen Drilling Company's discovery well, was abandoned last week at 6085 feet. This well was the second well for the company to drill in the Splendora area of Montgomery County, and both of the tests were abandoned. The Platte well made two drill stem tests, the first from 5826 to 5861 feet, but the tester slipped to about 5852 feet and 310 feet of mud carrying a salty taste was received from the hole in four and a half minutes. Quarter-inch choke was used on top and three eighths-inch on bottom. On the second test from 5835 to 5861 feet, the shoulder gave way, but the tester was opened five minutes. There was no show in this test. The well was then drilled to the abandoned depth. Top of the Fayette was found at 4690 feet, Catahoula Frio 2089 feet and were still in that formation at 2600 feet. Hockleyensis was encountered at 4945 feet and the Cockfield at 5775 feet with an elevation of 114 feet. As compared to the discovery well for the area, Steen Drilling Company's Texas Long Leaf Lumber Company 1, in the Walker County School Land Survey, Humble Oil & Refining Company's well topped the Cockfield 33 feet lower.

Near the town of Montgomery, in Montgomery County, a Cockfield test will start in the immediate future. The test will be on a 4600-acre block. The well is reported to be drilled in the J. Coner Survey. Approximately six or eight miles northwest of this new test, Smith & Cooper drill its Post 1, in the D. Roper Survey and was abandoned at 4007 feet. The top of the Cockfield was 3417 feet in this test.

Montgomery Wildcat Drills Ahead After Testing

Houston.—Four miles west and a little north of Esperanza, near the Walker and Montgomery County lines, Sayre Oil Company's Delt Land & Timber Company 1, J. H. Truitt Survey, in Montgomery County, is drilling at 3658 feet after making a drill stem test at 3512 feet on which the tester slipped to about 3550 feet. It showed gas and then turned to salt water thorugh a three eighths-inch choke on bottom. No choke was used on top and also no gauge. This wildcat topped the Cockfield at 3570 feet and is reported to be running normal.

Shell Petroleum Corporation's Creighton 1, 3½ miles due west of Conroe, in the Mary Connor Survey, Montgomery County, is drilling shale at 3740 feet after topping the Hockleyensis at 3719 feet. In the north section of the county, The Texas Company is taking a block of 3100 acres paying from two to three dollars per acre.

In the Willis area acreage is selling for three dollars per acre. Recently Gem Oil Company is reported taking a block for that price and then assigned to Aetna Oil Company half of the purchase.

Livingston Extension Well Nears Completion

Houston.—The second north extension test for the Livingston field of Polk County is nearing completion. Refugio Oil Corporation and J. C. Werby's Dick & Faling 2, 929 feet west of the first extension test and in the A. Veisca Survey, was drilling ahead below 4347 feet after topping the Cockfield at 4215 feet. The well was still in the formation at 4246 feet. Hockleyensis was topped at 3659 feet. A good oil sand was encountered from 4265 feet to 4286 feet.

T. D. Humphris' Orton 1, A. Viesca Survey, in the Livingston field, on a drill stem test from 4125 to 4130 feet, showed two tribbles of mud and seven thribbles of salt water through a three eighths-inch choke in seven minutes. There was a showing of gas but no oil. The well is now drilling ahead below 4130 feet.

In Liberty County, Greer & Frazier has worked up a block in the James Robinson Survey, direct southeast approximately 12 or 13 miles from the Cleveland field of the above county and has sold a $10,000 spread to Humble Oil & Refining Company, $10,000 spread to Magnolia Petroleum Company, $7,000 to Gulf Production Company, $10,000 to Wilde, and Crown Central 184 acres at $25 per acre, which will be paid with fuel oil to drill the well 7500 feet. Turnbull & Irwin and Woodley Petroleum Company have agreed to give Greer & Frazier $10,000 in cash to get leases. Also $34,000 bottom hole purchase letters for quarter interest in the proposed well and 100 acres near the drilling site, also 200 acres checkerboard through the block. Greer & Frazier have approximately 4500 acres in this area.

In Tyler County, Boone, Wallace and Lane's Crews 1, S. L. Graham Survey, was abandoned at 3025 feet. On a drill stem test from 1160 to 1205 feet the well showed oil. On another drill stem test from 1302 to 1327 feet the seat failed to hold and it showed nothing.

Ft. Bend County

Houston.—After the abandonment of Gem Oil Company's Farmer 1, in the Robert Hodge Survey, Fort Bend County, Humble Oil & Refining Company made location for Mrs. Anna Hackastedt 1, in the Robert Hodge Survey of the same county. The well is located 466 feet out of the southeast or east corner of the 245-acre tract. Gem Oil Company's well was abandoned at 6025 feet after topping the Discorbis at 4643 feet and the Heterostegina at 5120 feet. An odor of gas was found from 5653 to 5665 feet and several other cores were taken with odors of gas which contained salt water.

Lake Charles Wildcat Causes Some Leasing

Lake Charles, La. — Union Sulphur Company's Barbee Estate 1, northeast of Lake Charles, section 11-9s-8w, Calcasieu Parish, was drilling in shale at 7151 feet during the past week. The well is located on the north bank of the Calcasieu river. Directly across the river Union Sulphur Company has leased 15 acres for $125 per acre for a one-eighth interest in the lease. This makes a total of $1875 paid by the company for the 15-acre wildcat lease. This deal should indicate that the company has some kind of a showing in the wildcat that is being drilled on the north bank of the river. It is reported that the Discorbis in this test was encountered much higher than in the Barbee Estate 1, which was previously drilled and abandoned. However, information on the wildcat is not attainable as to the markers.

To the east of the above wildcat and west of the Iowa field, in Calcasieu Parish, a block of 5200 acres has been taken with a cash bonus of $2 per acre. The lessor is supposed to have some kind of electrical instrument in which he claims to be able to locate oil sands.

Louisiana Now Imposes $50 Fee for Drilling Permits

New Orleans, La. — Under Act 131, known as House Bill 194 of 1934, the Department of Conservation of the State of Louisiana is directed to impose and collect $50.00 for permit to drill each well for natural gas, oil, sulphur, salt or other minerals in the state.

According to the provisions of the act such permit shall be valid for 90 days from date of issuance and if actual drilling does not commence within said period of time the permit shall be renewed at the end of the 90 days and a fee of $5.00 shall be charged and collected by the Commissioner of Conservation for each such renewal permit.

The act provides that the $50.00 paid by the operating company shall be deducted from the amount of the severance tax due the state of Louisiana upon the products of any such well and only the surplus above the $50.00 shall be due, owing and payable upon the products of each such well.

The $50.00 fee is being imposed for the purpose of making a geological survey of the entire state in cooperation with the School of Geology of the Louisiana State University and a topographical survey of the state in cooperation with the Louisiana State Board of Engineers and the United States Geological Survey.

New Deep Record For Vermilion Parish

Lake Charles, La.—In the Gueydan field of Vermilion Parish, Pure Oil Company's Alliance Trust 6, was drilling at 8023 feet in sand at the close of the week to set a new deep record for the area. Previous to this test, Pure Oil Company's Southwest Land Company 2, was the deepest test and was abandoned at 8007 feet in December 1931. On this salt dome Pure Oil Company has been drilling for deeper production and recently the company obtained a three-months extension on their lease covering Mulvey Irrigation Company lands of about 400 acres, paying $5 per acre for the extension which gives them the right of suspending drilling operations during that period, and if they so desire they may further suspend drilling operations for successive periods of three months each by paying $5 per acre for such periods. Pure Oil Company is the only operator in the field at present. To the southwest of Abbeville, a party has assembled a block of 6800 acres in the area where Saxet Oil Company held a block for five years before allowing it to expire.

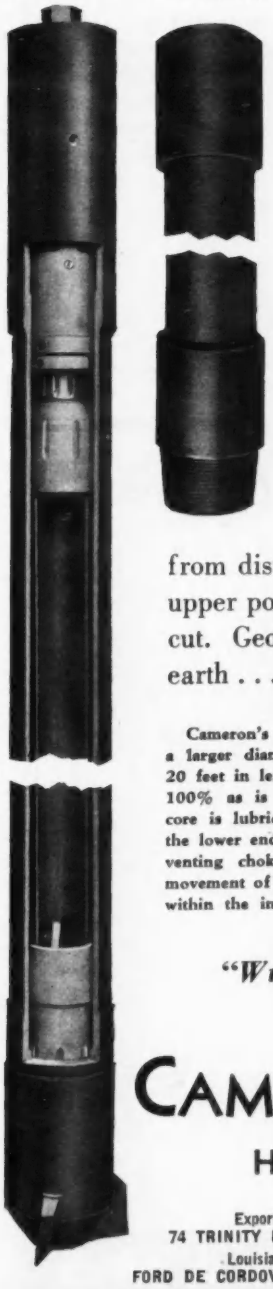
In Lafayette Parish and to the south of Lafayette a 15,000-acre geophysical block has been assigned to one of the major oil companies. The lessee retained a forty-eighth over-riding royalty and one dollar per acre additional on any selections made not exceeding 5000 acres.

Gulf Leases Large Louisiana Block

Bogalusa, La.—Gulf Refining Company is understood to have leased for mineral exploration 400,000 acres of the holdings of the Great Southern Lumber Company of Bogalusa. The acreage is located in St. Tammany, Tangipahoa, St. Helena, Livingston, and Washington Parishes. Gulf has a seismograph crew at work on the block.

Rapides Parish Gets in New Start

Lake Charles, La.—C. D. Lowe's Barret 1, section 40-5n-1w, northern edge of Rapides Parish, was rigging up at the close of the week. C. D. Lowe took over the old H. H. Temple et al block of about 20,000 acres and by the terms of the trade is to drill a 5000-foot test. H. H. Temple had made a location in Section 16 but the well was never drilled for unknown reasons. The new well is located 880 feet northeast of the southwest lines of section 40-5n-1w.



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Test Is Started on New Louisiana Prospect

Lake Charles, La.—Humble Oil & Refining Company has made location for a deep test on the Mittie Prospect, which was mentioned the previous week as a new prospect for Allen Parish. The well will be located 2440 feet north and 1220 feet east of the southwest corner of section 21-3s-5w. The name of the well is Industrial Lumber Company 1. The location is approximately two miles north of Ten Mile. Humble Oil & Refining Company is reported to have taken 5000 acres from the Industrial Lumber Company, to whom it is to pay $21,000 in cash or begin a well before August 8. Humble Oil & Refining Company also is reported to have taken all available smaller tracts in the south half of this township. One party is paying $30 base for royalty in that area.

Several miles to the east and southeast of Oberlin, Humble Oil & Refining Company has leased approximately 15,000 acres. This whole territory has a number of interesting surface features, and during the past six or eight months practically the entire area has been with torsion balance.

Gulf Refining Company is reported taking 2000 scattered acres and Magnolia Petroleum Company about 250 acres. There is practically no acreage available in the above territory, except lands belonging to a certain lumber company, and it is rumored that one of the major oil companies is trying to make a deal with that concern for its lands in Allen, Jefferson Davis and Beauregard Parishes.

Humble Oil & Refining Company's geophysical crews have been working through this area for some time. They have at present two torsion balance crews and reflection crews have just completed working the above territory. Continental Oil Company's torsion balance crew has also been working in the area.

Approximately 26 miles southeast of the new wildcat in Allen Parish, five miles south of Pine Prairie Dome in Evangeline Parish, where a discovery well made 1000 barrels per day from 1300 feet, Humble Oil & Refining Company has taken about 3000 acres on a 90-day drilling obligation. This acreage centers around the Haas Estate. If a producer results the second well must begin in 60 days on the same land adjoining the south Estate. There after drilling operations are provided for. It is known that Shell Petroleum Corporation, Humble Oil & Refining Company, The Texas Company and others, have done geophysical work in this area that resulted in geophysical pictures of varying sorts of importance, all indicating either dome formation or some unusual subsurface structure. Hass & Stokes made location for Hass 1, some time ago, in Avoyelles Parish, south of the above deal, the well was rigged up and shut down.

Another block is being taken in this area and the acreage is selling for $5 per acre. This block is in the area in which O'Brien Bros. drilled a shallow well with a water well rig about a year ago. One of the major oil companies is taking leases to do subsurface geological work.

L. H. Puckett has made location for Vidrine 1, 500 feet south of the old J. E. Ludean Vidrine 3, which was abandoned at 2100 feet. The wildcat is located 2500 feet east and 1700 feet south of the southwest corner of section 34-3s-2e, in Evangeline Parish, approximately 10 miles east of Pine Prairie. The area in which the wildcat is to be drilled has been worked by Humble Oil & Refining Company, Shell Petroleum Corporation and Continental Oil Company. Just recently Humble Oil & Refining Company has been purchasing scattered acreage in the Bayou Chicot area for $2 per acre. It is reported that the company is filling in acreage for geophysical work.

Beauregard Parish

Lake Charles, La.—To the west of De Ridder in T-2-S, R-9-W, Beauregard Parish, a party has taken a block of about 5000 acres belonging to Long Bell Lumber Company on a 30-day drilling option, with $1 per acre selection on those leases on which the well is not started. To the southeast of the proposed well Kirby Petroleum Company has leased four-fifths interest in certain lands for a cash bonus of $1008. The area has been worked by several of the major oil companies and Gulf Refining Company is now working its pendulum crew to the east of De Ridder.

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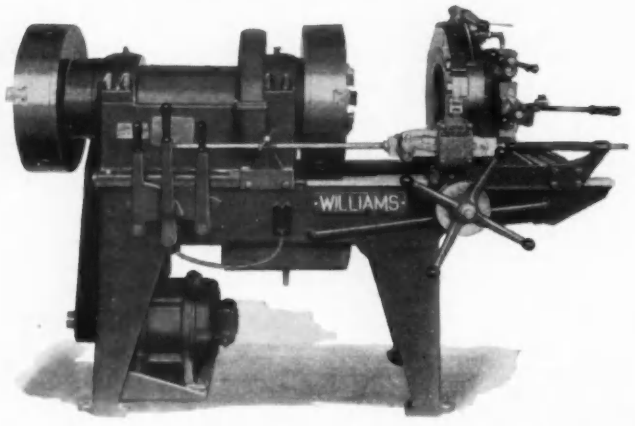

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Location Made for Flank Test at Sorrento Dome

Lake Charles, La.—Location has been made and road is being cleared for a deep test on the southwest flank of Sorrento dome, Ascension Parish, by Sorrento Oil Company, incorporated, of New Orleans, of which F. Oliver Roshko is vice president and general manager.

The test will be Lacey et al 1, located 3300 feet west and 1310 feet south of the northeast corner of Section 21-10s-4e, and it will be drilled at least 6000 feet, according to plans. It is on a lease block of 3000 acres assembled by Sorrento Oil Company, Incorporated, and embracing portions of Sections 8, 9, 16, 17, 20, 21, 22, and 29-10s-4e.

The drilling site is about midway between the locations of two previous tests, one by McElroy Oil Company and one by Union Sulphur Company. McElroy Oil Company's Lacey et al 1, northeast corner of Section 29, was drilled two years ago, and oil and gas showings were reported at four depths, including a sandy lime horizon at 3973-3980 feet, where heavy gas and a promising oil show were encountered. The test was abandoned at 4550 feet when drill stem was stuck. It had logged top of Oligocene at 3984 feet.

Union Sulphur Company's Lacey et al (White & Friant) 1-A, southeast quarter of Section 16, went into salt at 5470 feet and quit in salt at 6665 feet.

The above named official of Sorrento Oil Company was also president of McElroy Oil Company, and he is authority for the statement that in 1928 McCollum Exploration Company worked this area with refraction seismograph for the McElroy concern, finding evidence of a local "high" or shoulder, associated with the main Sorrento dome, with the apex of the local "high" at Barmen Spur. The McElroy Oil Company test was drilled on the south side of that indicated local "high," and the proposed test of Sorrento Oil Company has been located on the north side of it.

Present activity at Sorrento also includes a drilling well of Union Sulphur Company, the United Lands Company 26, located on the east side of the dome in Section 14. It is drilling below 5700 feet.

Sorrento was the first salt dome to prove productive east of the Mississippi River, having been ushered in as an oil field early in 1928. About one half dozen oil wells have been completed in the field, and cumulative production has been over 500,000 barrels. Current output is around 30 barrels daily from three wells.

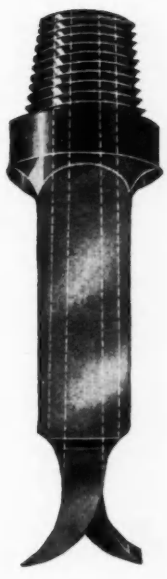
Five Completions in Louisiana Coast Area

Lake Charles, La.—Three failures and two producers comprise the past weeks completions along the Louisiana Gulf Coast. The completions showed a decrease as compared to the previous week. The two producers yielded 2469 barrels of pipe line oil per day.

Completions along the Coastal area for the past week are as follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
CAMERON MEADOWS—		
Humble O&R Co., Cameron Meadows 8	*	4548
IOWA—		
Magnolia Pet. Co., Wait 7	768	6935
LEESVILLE—		
The Texas Co., L. L. E. Leesville 22	1701	3721
BEAUREGARD PARISH—		
Federal Pet. Co., Lutcher Moore 1, 3 mi nw of Lucas, sec 4-7s-12w	*	8722
ST. BERNARD PARISH—		
Joseph Danciger, Delacroix Land & Fur Co. 1, near Oliver, sec. 127-14s-14e	*	lcn.

*Failures; †Junked; ¶Million cu. ft. gas.



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Fifth Marl Producer Extends Converse Pool

Shreveport, La.—Immediate hope of production from the lower Cretaceous in the Converse shallow chalk rock field in Sabine Parish was given a set-back last week when tests drilled to the deeper horizon proved disappointing, one being abandoned and the other being shut down.

However, indications were that the Nacatosh marl above the Saratoga chalk, the latter being one of the producing horizons, would be extended and would add the fifth marl producer for the field.

Calatex Oil & Gas Company shut down Whitney Corporation 1, SW SE Section 4-9n-13w, at 3310 feet, although a gas show appeared in a drill stem test of the last 100 feet of hole, which had previously shown some oil at several depths.

Two miles north of shallow Converse's main field and a quarter of a mile north of an extension shallow producer, George L. Pace abandoned DeSoto Corporation 2, NE SE Section 27-10n-13w, at 3460 feet.

One half mile north of the nearest of the four previous Nacatosh marl producers, Laurel Petroleum Company is completing Frost Lumber Company 6, Section 20-9n-13w, as a small commercial well at 1393 feet. Other wells in Converse producing from the marl are G. H. Collins' Crauford 3, Section 20-9n-13w; Windsor Oil Company's Graham A-1, in the same section; Helena Oil & Gas Company's Frost Lumber Company 1, Section 19-9n-13w, the discovery well of the Converse field, and McCormick et al's Henderson 1, Section 29-9n-13w.

Louisiana Registers Increase in Permits

Shreveport, La.—Fifty-nine drilling permits were issued during the last two weeks in Louisiana by the Minerals Division of the Louisiana Conservation Commission. Thirty-seven were for North Louisiana parishes.

The new fee of $50 for securing a drilling permit which went into effect August 1, caused a large number to be filed just before the "deadline" but no list was issued of permits the preceding week by the division.

The following North Louisiana parishes secured new operations:

Bossier, three; Caddo, eighteen; De Soto, four; Rapides, one; Sabine, nine; Webster, two; and Winn, one.

South Louisiana parishes obtaining permits were: Acadia, three; Allen, one; Calcasieu, one; Cameron, four; Iberia, two; St. Landry, six; Terrebonne, one, and Lafourche, three.

Rodessa Gas Field Extended Into Texas

Shreveport, La.—Indications were last week that production in the Rodessa gas field, northwest Caddo Parish would be extended one fourth mile west across the Texas line into Cass County, which will be the first commercial production for that county.

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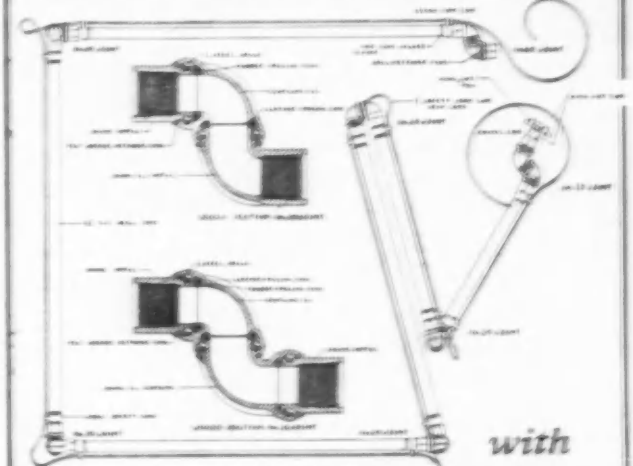

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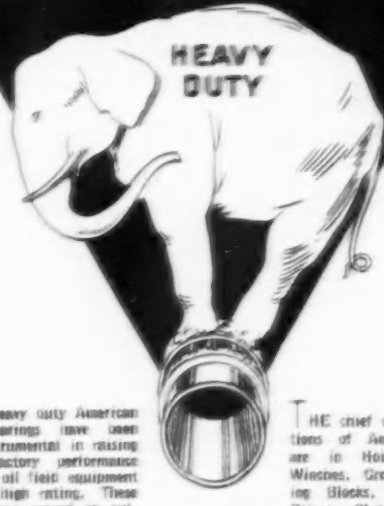

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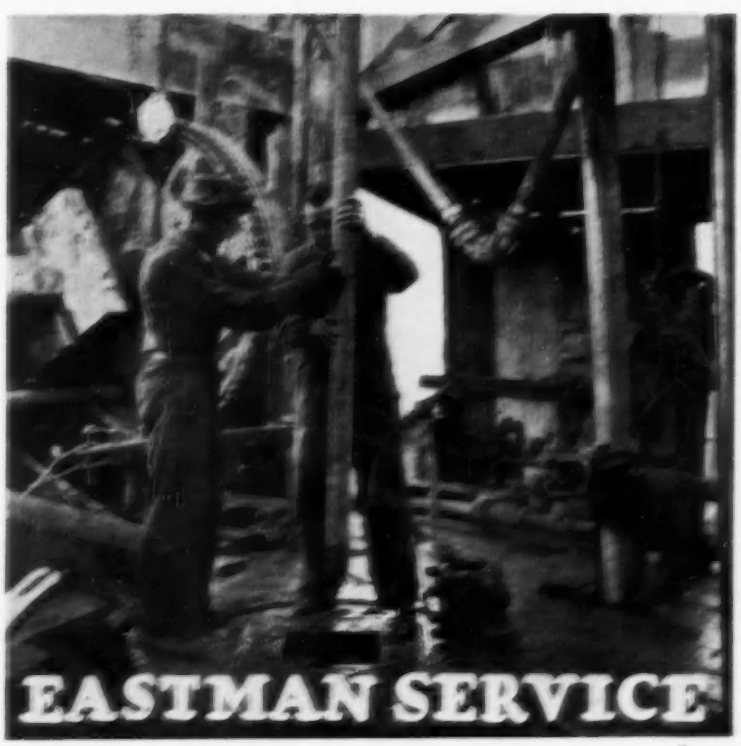
Premier Investment Co., R. E. Wyche 4, nw nw 14-19n-11w	15	397
CADDO PARISH—		
Producers Pyramid, W. P. Hammock 2, sw nw 3-18-16	*	927
Shoreline Oil Corp., Crystal O&R Corp. 42, se nw 13-21n-16w	20	1060
S. P. Harrell 1, se se 2-21n-16w	4	1034
SABINE PARISH (Converse)—		
Geo. L. Pace, DeSoto Corp. 2, ne se 27-10n-13w	*	3460
Three D Oil Corp., Cranford 3, nw se 20-9n-13w	*	1690
SABINE PARISH (Zwolle)—		
Pelican Nat. Gas Co., Sabine Lbr. Co. 15, sw ne 12-7n-12w	110	2615

*Failures; †Junked; ‡Million cu. ft. gas.



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Fifth Marl Producer Extends Converse Pool

Shreveport, La. — Immediate hope of production from the lower Cretaceous in the Converse shallow chalk rock field in Sabine Parish was given a set-back last week when tests drilled to the deeper horizon proved disappointing, one being abandoned and the other being shut down.

However, indications were that the Nacatosh marl above the Saratoga chalk, the latter being one of the producing horizons, would be extended and would add the fifth marl producer for the field.

Calatex Oil & Gas Company shut down Whitney Corporation 1, SW SE Section 4-9n-13w, at 3310 feet, although a gas show appeared in a drill stem test of the last 100 feet of hole, which had previously shown some oil at several depths.

Two miles north of shallow Converse's main field and a quarter of a mile north of an extension shallow producer, George L. Pace abandoned DeSoto Corporation 2, NE SE Section 27-10n-13w, at 3460 feet.

One half mile north of the nearest of the four previous Nacatosh marl producers, Laurel Petroleum Company is completing Frost Lumber Company 6, Section 20-9n-13w, as a small commercial well at 1593 feet. Other wells in Converse producing from the marl are G. H. Collins' Cranford 3, Section 20-9n-13w; Windsor Oil Company's Graham A-1, in the same section; Helena Oil & Gas Company's Frost Lumber Company 1, Section 19-9n-13w, the discovery well of the Converse field, and McCormick et al's Henderson 1, Section 29-9n-13w.

Louisiana Registers Increase in Permits

Shreveport, La.—Fifty-nine drilling permits were issued during the last two weeks in Louisiana by the Minerals Division of the Louisiana Conservation Commission. Thirty-seven were for North Louisiana parishes.

The new fee of $50 for securing a drilling permit which went into effect August 1, caused a large number to be filed just before the "deadline" but no list was issued of permits the preceding week by the division.

The following North Louisiana parishes secured new operations:

Bossier, three; Caddo, eighteen; De Soto, four; Rapides, one; Sabine, nine; Webster, two; and Winn, one.

South Louisiana parishes obtaining permits were: Acadia, three; Allen, one; Calcasieu, one; Cameron, four; Iberia, two; St. Landry, six; Terrebonne, one, and Lafourche, three.

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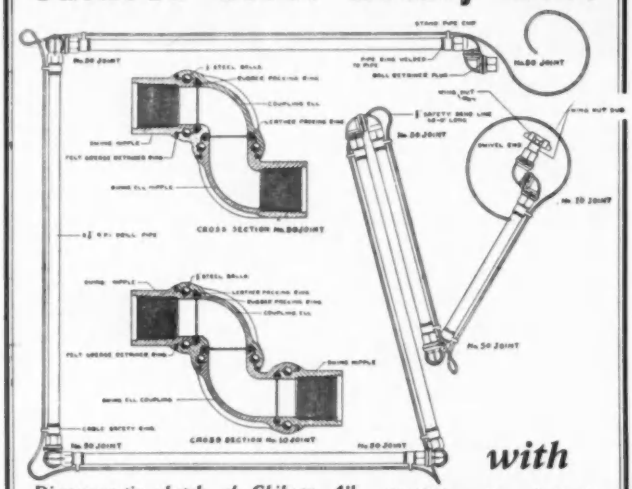

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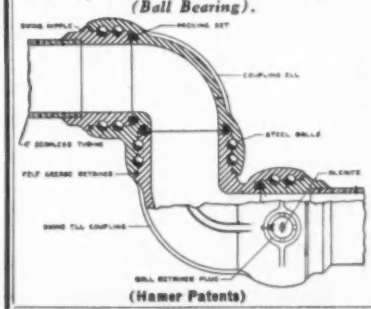

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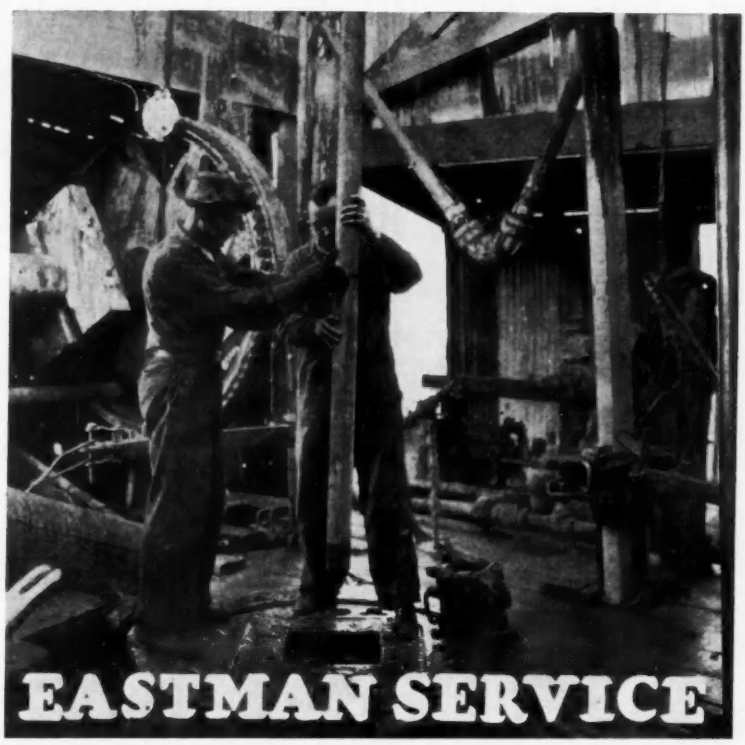

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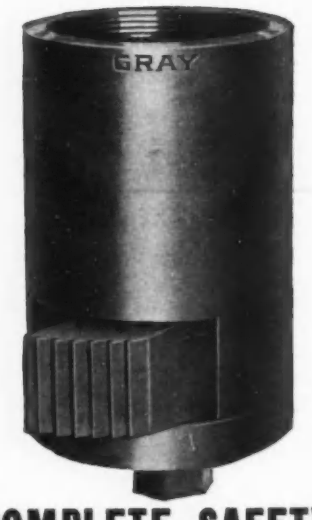
Magnetometer Survey Is Completed in Louisiana

Shreveport, La.—W. R. Julian of Shreveport has completed a magnetometer survey of a 34,000-acre block owned in fee in Grant Parish possibly "in the trend" in central Louisiana, by John R. Jamison of Colfax. The survey is said to have disclosed the existence of a deep-seated salt dome. The land lies in one block centering in Section 42-6n-3w and is known as the Byant Plantation.

H. H. Temple who some time ago assembled a block centering in Section 13-7n-4w, Grant Parish, which later was transferred to L. L. Lindsay, Trustee, has re-taken this block and plans to drill a test half a mile north of a test drilled to 2360 feet by Lindsay.

GRAY BACK-UP TOOL



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A strong, practical, economical tool that will safely, conveniently, and efficiently perform that for which it is intended.

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WRITE FOR COMPLETE CATALOG OF ALL GRAY PRODUCTS

GRAY TOOL COMPANY

HOUSTON — TEXAS

Four New Reports Made in Arkansas

El Dorado, Ark.—Four first reports were added last week to Arkansas' drilling operations. The new tests follow:

In Ouachita County, T. J. Gaughan et al have derrick up for a wildcat test, M. Bragg 1, NW SW Section 30-13-17. In the north edge of the old Stephens field, Nevada County, O. F. Whittaker has spudded W. T. Guttry B-1, center SE SW Section 2-15-20. In the Urbana district, Union County, McCreslenn Oil Company is rigging for Norman 2, 330 NW SEc SE NE Section 3-18-13. In the Garland City field, Miller County, Magnolia Petroleum Company made location for E. V. Olivet 4, 330 S&W NEc Section 4-16-26.

Five Completions Made in Arkansas

El Dorado, Ark.—Five completions were recorded last week in Arkansas, only one being a commercial well, this being a 30-barrel pumper in the Garland City field, Miller County, which extended production south one fourth of a mile.

Completions last week in Arkansas follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
CONWAY COUNTY—		
Southern Union Gas Co., Feldman 1, 6-5n-17w	*	3100
LEE COUNTY—		
Ark.-La. Pipe Line Co., E. McDonald 1, sw sw 28-1n-4e	*	3734
MILLER COUNTY—		
Lee Timberlake, E. L. Beck 1, nw se 33-15-26	*	2967
Jno. Wrather, E. V. Olivet 1, nw ne 4-16-26	30	2957
E. L. Young, Patterson 1, se ne 5-19s-28w	*	3655

*Failures; †Junked; ¶Million cu. ft. gas.

Alabama Block of 15,000 Acres Leased

Mobile, Ala.—A block of approximately 15,000 acres has been assembled by Sam J. Patrick of Lexington, Kentucky, centering in township 6 south, ranges 13 and 14 west, Franklin County, Alabama, on what is known as the Cedar Creek structure.

Several years ago a Benedum & Trees subsidiary, Pittsburgh Oil & Development Company, had a test drilled in Section 26-8s-14w, Franklin County, by P. J. McAlpine of Amory, Mississippi, which reported an oil show of about one gallon daily at a depth around 2600 feet.

Louisiana Mineral Division Is Moved to New Orleans

Shreveport, La.—Headquarters of the Minerals Division of the Louisiana Conservation Commission which has been located in Shreveport since it was established about 15 years ago, will be moved to New Orleans at once, according to an order received last week by Dr. J. A. Shaw, director. A branch office to handle North Louisiana will be continued here similar to one established several years ago in Monroe.

Increased activity in Gulf Coastal Louisiana is believed to have prompted the move.

Aside from about three members of the staff to continue in Shreveport the rest of the staff including the director will move to New Orleans. It is reported that Albert D. Miller, paleontologist for the division, with headquarters in Shreveport, will move to the Lake Charles office of the division.

Mississippi Well Has Oil Showing

Jackson, Miss.—Gulf Refining Company of Louisiana last week was drilling in preparatory to testing May L. Williams 1, SE NE Section 33-5s-17w, Pearl River County, Mississippi, "in the trend." This well is reliably reported to have had an oil show on the ditch at the 3700-foot level before six and five eighths-inch casing was cemented at 3696 feet. Total depth is 3707 feet. The well has been drilled "tight" and some reports give total depth 3808 feet.

It was the first of approximately 15 holes that the Gulf has drilled on its large holdings in south Mississippi in which a string of casing was cemented.

Leasing Continues In Mississippi

Natchez, Miss.—Kirby Petroleum Company of Houston, through W. T. Hancock, Jr., also of Houston, has assembled a 25,000-acre block centering in Section 29-1n-2w, Wilkinson County, Southwest Mississippi. The leases are for 10 years at 25 cents bonus and 25 cents rental.

It is reported that before the acreage was leased geological work in the area was done by George Sawtell, chief geologist for the Houston company.

Humble Oil & Refining Company last month paid rental on 22,000 acres in Wilkinson County. It dropped about 70,000 acres in that county several months ago.

Sun Oil Company has about 50,000 acres in the southern part of the county under lease.

Oil Activity in Florida Increases

Miami, Fla.—At the Tamiami Trail well, in the very heart of the Everglades, 43 miles due west of Miami, fishing operations are still going on. This well is standard equipped and drilling on the lost tools causes them to unscrew at the joints and necessitating their being taken out in sections. The first thing to come out was the rope socket on the last string lost. Bottomed at 4570 feet.

At the Kendall well on the southwest outskirts of Miami, new leases are now being taken preparatory to erection of new derrick and installation of rotary equipment. Negotiations for refinancing are going ahead satisfactorily and it is expected that this hole will be deepened materially some time this fall or winter. Now bottomed at 5432 feet.

Southern Petroleum Company's Hillsborough County well, southeast of Tampa, is still a derrick but it is said to be about ready to spud in.

Joe Snyder's Rock Hill well, six miles south of DeFuniak Springs in Walton County, is under negotiation to be taken over by Electric Geometer Corporation, which is preparing to take up considerable acreage in western Florida and are said to plan the spudding of two wells within the next 90 days. The Rock Hill well also is to be deepened from its present new hole depth of 4700 feet.

Ray Estabrook is reported to have interested Hammon Oil Company of Oklahoma City in some work in West Florida and if their geological and geophysical work proves satisfactory they may drill in Northern Escambia or Santa Rosa County.

Wm. G. Blanchard of this city is now negotiating for a 100,000-acre block in Santa Rosa and Okaloosa counties and if he acquires it on proper terms he plans to do extensive geophysical and geological work there.

Alabama Blocks Leased

Mobile, Ala.—United Gas Public Service Company has taken a large block of acreage in Washington County, southwest Alabama, in township 2 north, ranges 3 and 4 west under an exploration contract. The Texas Company has also placed on recerd approximately 10,000 acres of leases in the same county, being located in 3 and 4 north, ranges 2 and 3 west, Washington County.

Cooper Field Has Eight Active, More in Prospect

Hobbs, New Mexico.—The Cooper field, Lea County, is now the most active area in New Mexico, with eight rotary rigs in operation, and a number of additional locations have been authorized in the event the tests now nearing the oil horizon score commercial production. Phillips Petroleum Company has four tests underway on a 200-acre tract sub-leased by Pure Oil Company and located between the two completed wells in the field. One test each has been started by Humble Oil & Refining Company, Stanolind Oil & Gas Company, The Texas Company and General Crude Oil Company-Magnolia Petroleum Company, discoverers of the prolific oil area.

Phillips Petroleum Company's C. D. Woolworth-Pure 1, NWc SE Section 23-24s-36e, and an east offset to the discovery well, was coring below 3500 feet late last week. The oil horizon is due within the next few feet. This test made drill stem test at 3420-3438 feet, with an elevation of 3342 feet, and was estimated at 3,200,000 cubic feet of dry gas daily, a smaller volume of gas than that reported in the discovery well at this level.

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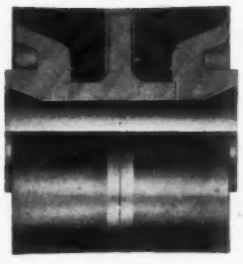
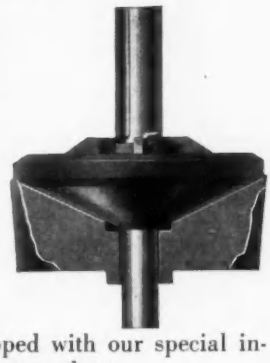
A Pair That Can't Be Beat

MacCLATCHIE "WEAREVER" MUD PUMP PISTONS



The MacClatchie "Wearever" Mud Pump Piston is so designed that all wear is absorbed by the rubbers which are economically replaced at less than half the price of a new piston. All bodies are machined from drop forged steel. They do not break. We have recently made several improvements in the rubbers and bodies of these pistons which has added to their wearing qualities. Made for all sizes and makes of pumps for taper and universal rods.

MacCLATCHIE MUD PUMP VALVES



The MacClatchie Valve is the original valve of this type. Made in over 90 styles and sizes for every make of pump. It has never been successfully imitated. There are more MacClatchie valves used than any other make. Quality is responsible. MacClatchie valves can be equipped with our special inserts for pumping hot oil, hot mud, etc.
MacClatchie Mud Pump Valves are made of drop forge steel. The seats are accurately hardened and ground, wrapped in oil paper and individually sealed in heavy cartons. Cut out mud ends are unknown to users of MacClatchie Valves.

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pletion and a new location was credited to the Eunice field last week. Continental Oil Company's State 1-C, C NW NW Section 20-21s-36e, flowed by heads from saturated lime at 3850-3950 feet, then injected 1000 gallons of acid solution. The results of this acid treatment has not been determined, although the oil horizon responds favorably to chemicals in this area. The same company's State 2-C, C SW NW Section 20-21s-36e, made oil on drill stem test at 3825-3875 feet, then shut down to cement seven-inch pipe at 3829 feet. Tide Water Oil Company contributed the new location and is moving in materials to drill O. L. Coleman 3, C NE NE Section 17-21s-36e, thereby creating two offsets for Gypsy Oil Company and one for Skelly Oil Company.

One Completion In Northern Wyoming

Cody, Wyo.—One completion and one new start were recorded in the oil fields of Northern Wyoming.

Paul Stock's Government 1, SE SE NE Section 29-51n-100w, in the Oregon Basin black oil field, had an initial production of 450 barrels. It logged the sand between 3585-3636 feet. In the same field, Dry Creek Oil Company (Val M. Kirk and associates) are drilling an interesting test in Kirk 1, Lot 2, Section 9-50n-100w. The test is located in the southern fault block sector of the field, and will be the first well to test the Wall Creek series for shallow light oil production. Objective is expected at around 1700 feet. The test is drilling at 700 feet with the 15½-inch casing set at 59 feet.

Argo Oil Company is completing its Ellen 10, SE SE NW Section 14-44n-98w, in the Hamilton Dome black oil field, Hot Springs County. The test is swabbing 300 barrels daily with the Embar logged between 2676-93 feet. Operators are preparing to install pumping equipment.

Garland Oil Company's Government 2, center of the south line of the NE NW Section 32-56n-97w, Garland Dome oil field, is drilling below 300 feet. Company is moving in equipment for Cotner 1, Section 10-56n-97w, in the north end of the field, which will be a shallow test for light oil.

In the Frannie field, Val M. Kirk started a new test. It is Kirk 2, SE SW SW Section 24-58n-98w, and it is spudding at 100 feet. Stanolind Oil & Gas Company's Government 6, NW NW Section 25-58n-98w, is drilling below 500 feet.

Bowdoin Field

Malta, Mont.—Montana Utilities Gas Company completed its Styles 1, CNW NW Section 23-31n-34e, in the Bowdoin gas field, Phillips County, Montana, for 1,500,000 cubic feet of gas initial at 800 feet. The company is drilling several shallow gas wells to supply gas for the Fort Peck federal project. The company this week spudded No. 526 Federal Land Bank, CNW SW Section 23-31n-34e.

Kevin-Sunburst Has Increased Activity

Kevin, Mont.—The Kevin-Sunburst field is showing an increase in drilling activity when this week there were six tests under way in the old field in Toole County. Potlatch Oil Company's Fee 2, NW SW NW Section 21-34n-1w, is spudding. W. C. McKnight's Sunburst 1, SE NW SW Section 19-35n-2w, is drilling at 300 feet. Nepstead, Vanderpas et al's Helgason 8, NW NW Section 28-35n-1w, is drilling at 1200 feet. Texas Pacific Coal & Oil Company's Howling 11, SE NE Section 9-35n-2w, is spudding. E. R. McKee's Fee 1, NE SE Section 24-35n-2w, is drilling at 635 feet. A. C. Crumley's Fryberger 4, SW SE SW Section 24-35n-2w, is drilling at 300 feet.

Soap Creek Pool

Hardin, Mont.—California Independent Oil Company is running 8¼-inch production string to 1618 feet in Indian 38, SW NW NE Section 34-6s-32e, in the Soap Creek field, Big Horn County. Test had a show of oil in the Tensleep at 1550-60 feet. Hole has topped the Amsden formation.

Dry Creek Field

Billings, Mont.—Ohio Oil Company's Agnes Maddox 15, NW NW Section 10-7s-21e, in the Dry Creek field, Carbon County, southern Montana, is temporarily shut down at 4842 feet awaiting new drill pipe. Objective, the Dakota, is expected at 5200 feet.

Cut Bank Extension Try Is a Failure

Cut Bank, Mont.—The producers Development Syndicate's east extension wildcat in the South Cut Bank field, is being plugged and abandoned. The well, Helgason 1, NW NW Section 29-32n-4w, four miles east and a mile south of The Texas Company's State, nearest producing well, drilled into sulphur water when it topped the Madison at 2785 feet. The well missed the Cut Bank sand, which is apparently lensed out to the east.

The northern sector of the field, Montana Headlight Company's Yunck 2, C NW SW Section 1-34n-6w, flowed 50 barrels in the first four hours. Hole bridged, and operators are cleaning out preparatory to running production string and completing. The well drilled only two feet into the Cut Bank sand with hole bottomed at 2790 feet.

Five miles south of the field, Barmac Producing Company's Bruning 1, C SW SW Section 1-31n-5w, wildcat in the Valier area, Pondera County, is drilling at 2393 feet. It set the eight-inch casing at 2353 feet. Test should be an early completion, expecting to pick up the producing sand at around 2750 feet or approximately 200 feet higher than in the Cut Bank wells.

Six new tests started in the field this week. In the area just east of the town of Cut Bank, two tests got under way: Lon Crumley's Jones 1, C NW SE Section 31-34n-5w, moving in material. Montana Power Gas Company's Van Ormer 1, C SE SW Section 8-33n-5w, rig up. The Texas Company is moving in material for Morrison 2 M-358, Lot 6, Section 22-35n-6w, and for Schlag 2, C SE SW Section 26-35n-6w. Indian Oil Company's (R. C. Tarrant's) Winkler 2, SE SW Section 25-35n-6w, is rigging up, and Par Oil Company's Haines 4, SE SE Section 2-34n-6w, has rig on location.

Rocky Mountain States Completions

MONTANA

Company, Well and Location	Init. Prod. Bbls.	Depth
GLACIER COUNTY (Cut Bank Field)—		
Annand & Hutchings, Bonnet 1, nw se 10-32n-5w	*	2951
Montana Power Gas Co., Whetstone 1, cse ne 7-33n-5w	*	2880
Santa Rita Oil & Gas Co., Whetstone 3, Lot 1, 27-35n-6w	35	2926
Texas Co., Purdy 4, sw sw 35-35n-6w	50	2950
Consolidated Gas 1, 15-35-5w	¶5	2809
TOOLE COUNTY (Kevin-Sunburst field)—		
Coolidge & Coolidge, Zachor 1, sw se nw 20-35n-1w	35	1591
Imperial Petroleum Co., Bluhm 12, n½ se ne 19-35n-1w	20	1600
E. P. McKee, McKee 1, ne ne se 24-35n-2w	10	1506

NEW MEXICO

Company, Well and Location	Init. Prod. Bbls.	Depth
SAN JUAN COUNTY (Stoney Butte Wildcat Structure)—		
Reserve Oil Co., Test 4, se se 36-22n-14w	50	818

*Failures; †Junked; ¶Million cu. ft. gas.

108-Mile Pipe Line to Be Built in California

Los Angeles.—Standard Oil Company of California has made plans for the building of a new pipe line, to cost some $4,000,000, which will connect the oil fields of the San Joaquin Valley with the company's marine terminal at Estero Bay (San Luis Obispo County). The line will consist of 108 miles of 12-inch pipe, starting at the company's Rio Bravo pump station in Kern County and passing to a junction with the company's present lines that run from the Kettleman Hills field to Estero Bay, at a point in Cholame Valley. From there it will follow the present right-of-way to Estero Bay.

The line is being designed to handle both light and heavy oil. Five new pump stations will be built and there will be some revamping of present facilities at Rio Bravo and Kern River. It is estimated that it will require seven months to complete the work and the service of about 1000 workers. The line will have a capacity of about 60,000 barrels of oil per day and with the modern equipment which will be installed will provide the company with a thoroughly efficient means of transporting crude oil from the San Joaquin Valley to tide water where it will be loaded into tankers for transport to Richmond refinery and elsewhere. The new system will provide a more economical means of transportation of San Joaquin Valley oil than through the lines that now exist from the oil fields to Richmond.

New Kern County Pool Has Thirteen Operations

Los Angeles.—Edison is the name of the new field recently found in Kern County, some three miles northeast of the Mountain View field, in the same county. The district early in its development was known as Duff. Two wells are now on production. There are six drilling projects and seven locations, foundations and rigs.

The discovery well was drilled to 2200 feet for 25 barrels of 14 gravity oil, and was started by L. C. Osborn of Bakersfield, and was known as No. 2. Monterey Exploration Company then drilled No. 3 to 3340 feet, where it ran into granite, and was plugged back to 3282 feet for 150 barrels of 22.4 gravity oil, but has been beaned back to 25 barrels to conform to proration rules.

Same company's Nozu 1 has reached 2280 feet in oil sand, cemented 11¾-inch casing at 2035 feet and is setting liner for a test of the upper formation. The production in the field is coming from the Vedder and Walker formations.

A number of companies have obtained leases in and around the new field. Present operators include Barnsdall Oil Company, Centralia Oil Company, Gilco, Inc., A. T. Jergins Trust, A. T. Jergins Syndicate, Mohawk Petroleum Company, Monterey Exploration Company and Shell Oil Company.

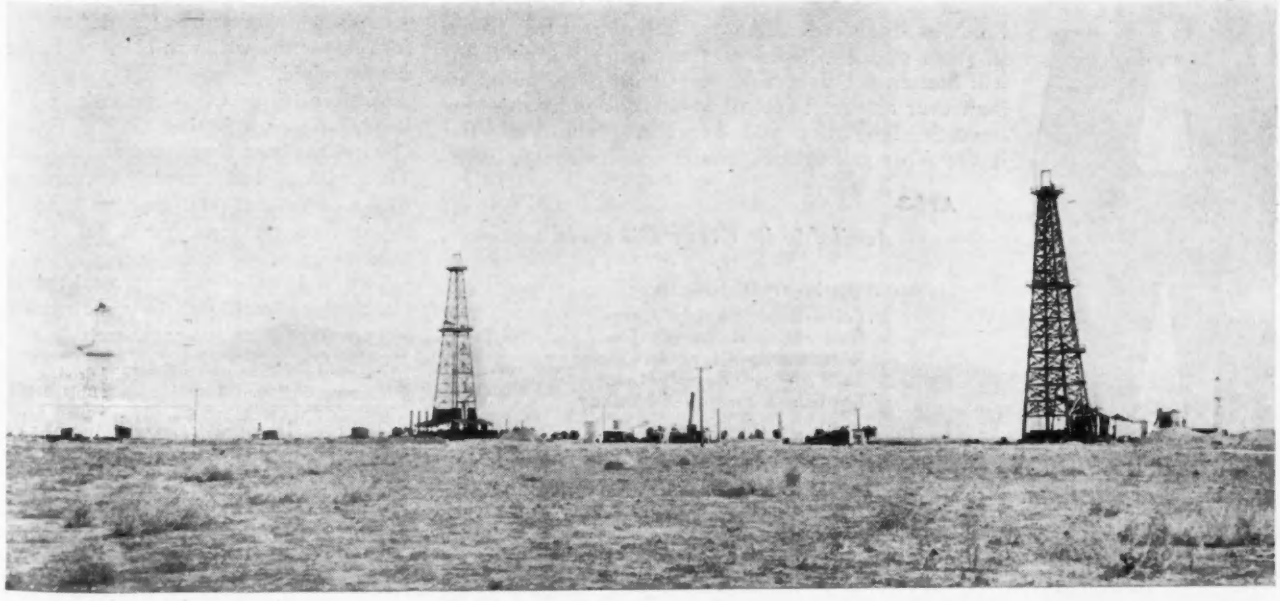
The field is not expected to be very large in extent, and no real deep drilling will be resorted to, due to the presence of granite around 3340 to 3350 feet.

Deep Inglewood Well To Test Showings

Los Angeles.—Plymouth Oil Company's Pollard 1 in the Inglewood field, bottomed at 5602 feet, and which had some very encouraging showings above that depth, is preparing to cement a string of pipe at 5440 feet for a production test of the last 162 feet. Attempts were made to test upper oil zone with a formation tester but plug would not hold. It is possible a production test can be concluded by August 15.

The other deep test is Pacific Western Oil Company's Rubel 17, which is drilling in shale and oil sand at 5058 feet. Tester is being run in this hole for additional information.

Four other holes are being drilled in this old field, but it is not expected much activity can be looked for until the two deep tests are completed, one way or the other.



New Edison field in Kern County, California. Right, is the discovery well, finding heavy oil at 2200 feet. In center is the first well to find 22 ravity oil at 3282 feet. On extreme left is Shell Oil Company's Duff 2, which is drilling at 1560 feet. Granite is found at 3340 feet.

Deep Test in Old Potrero Has Showing

Los Angeles.—Wilshire Annex Oil Company's Poterero 2, in the Old Potrero field, has drilled to 7861 feet with last cores showing shale streaked with oil sand. A string of 8⅝-inch casing is to be cemented at about 6900 feet, preparatory to an early production test. This is the lone driller in the old field and if the well is a producer, other drilling can be expected, for the deeper zone.

Dominguez Has New Locations

Los Angeles.—Two new wells are starting at Dominguez, one each by Shell Oil Company and Union Oil Company. One new hole was spudded July 29 and Shell has two locations that should be started by September. Ten strings of tools are already running.

Shell Oil Company's Reyes 55 was tested at 5506 feet July 28 for 1640 barrels of 17.5 gravity oil, cut 50 percent. The well was killed and water was located at 5470-5485 feet. Last string of 8⅝-inch casing had been cemented at 4743 feet and 751 feet perforated pipe had been landed at 5496 feet for the test.

Union Oil Company's Hellman 31 is bottomed at 6334 feet with 8⅝-inch casing cemented at 6170 feet. Some more hole will be made. Union's Carson 6 is bottomed at 6440 feet and 6⅝-inch casing has been cemented at 6410 feet, preparatory to drilling ahead.

All activity is in the hands of Union Oil Company and Shell Oil Company, except three tests, only one of which is drilling.

Deep Well Is Still Milling

Los Angeles.—General Petroleum Corporation is still milling on stuck tubing in Berry 1, the deepest well in the world, at Belridge, the total depth being 11,377 feet. The job is a slow one and the drillers are taking every care.

Union Oil Company's Belridge 18 in the same field was swabbed on a test with bottom at 8027 feet and the result was water and gas. A string of 8⅝-inch casing had been cemented at 7797 feet and three-inch tubing run to 7499 feet. The hole will be deepened.

Belridge Oil Company cemented 11¾-inch casing at 4969 feet in its No. 50-27 and is ready to drill ahead. No. 16-35 is drilling at 6720 feet in hard sand. They set 11¾-inch casing in this hole at 5690 feet. Both holes will probably be real deep tests.

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Mohawk Field Has Nineteen Drilling Tests

Los Angeles.—A late completion at Mountain View is good for 1300 barrels of 27.4 gravity oil from 5824 feet. This is Mohawk Petroleum Company's Hood 4 in Section 30-30-29. A string of 8⅝-inch casing was cemented at 5591 feet, well was started June 11, and gives Mohawk eight producers in the field.

There are 19 drilling wells in the field and two rigs. The Texas Company has rigged up Mateo Smith 1 in Section 14-30-28, while Union Oil Company's Kern Co. 2 in Section 15-30-28, is drilling at 5195 feet. Its Kernco 1 was completed at 5355 feet and is now making 130 barrels of 21.1 gravity oil, cut 2.5 percent.

Standard Oil Company is drilling two wells, and Mohawk is drilling the same number.

Santa Fe Springs Gets Two New Tests

Los Angeles.—Two new wells are to be started at once in the old Santa Fe Springs field, one by General Petroleum Corporation and the other by The Texas Company. Both are inside wells. Ohio Oil Company is starting Brown 1 in Section 22-27-27, Kern County. One well each is announced for Midway, Edison and Mt. Poso.

Seven Completions In California Fields

Los Angeles.—Standard Oil Company's No. 6-33J, Section 33-21-17, Kettleman Hills, was completed July 29 for 5040 barrels of 36.8 gravity oil and 7,000,000 cubic feet of gas at 8550 feet. Tubing was run to 8402 feet and 954 feet of seven-inch perforated was landed at 8540 feet. Later the well was killed so tubing can be raised.

Western Gulf Oil Company's S. P. Land Company 1, Section 15-17-15, Fresno County, has been abandoned at 8868 feet. The wildcat had several encouraging shows of both oil and gas, but it failed to produce on tests, made at several points.

Two old wells were recompleted at Huntington Beach and the same number were worked over at Long Beach.

Company, Well and Location	Init. Prod. Bbls.	Depth
KETTLEMAN HILLS—		
Standard Oil Co.'s No. 6-33J	5040	8550
MOUNTAIN VIEW—		
Union Oil Co., Wible 1	300	5580
MESA—		
Fred Cole, Young 1	500	2100
LONG BEACH—		
The Texas Co., Brown 2	200	5032
West American Oil Co., W. A. 2	330	4320
SANTA FE SPRINGS—		
Union Oil Co., Bell 64	150	4537
FRESNO COUNTY—		
Western Gulf Oil Co., S. P. L. 1	*	8868

*Failures; †Junked; ¶Million cu. ft. gas.

Michigan Operators Protest Gas Withdrawal Rate

Mt. Pleasant, Mich. — Although agreeing in the main to tentative rules and regulations for the governing of natural gas production, transmission and marketing, operators filed objections to certain specific sections of the rules at a hearing between 250 gas operators and the State Public Utilities Commission here August 7. As a result, the rules will be reconsidered with a likely possibility of revamping. A final hearing on the proposals will be heard at Lansing later in the fall.

The chief protest was made by operators against the proposal to set the maximum withdrawal of gas from a well at 15 percent of the open flow production. The present state law, written in 1929, limits the daily withdrawal to 25 percent.

Kenneth A. Covell, gas engineer for Pure Oil Company, declared that limiting the withdrawal to 15 percent of the open flow would in effect "require operators to develop 66 2/3 percent more gas to supply a given market than at the present standard of restrictions." This increased load, he said, does not appear warranted at this time and would prove a tremendous burden on operators by increasing their capital investments without increasing their revenue.

The lower maximum was understood to have been written in the new rules as a conservation measure to assure an adequate supply of gas to markets over a period of years and as a safe basis of withdrawal without damaging wells or fields.

However, operators were unanimous in the protest against the proposal on the grounds outlined by Covell. He and others recommended to the commission that if a change is to be made in the present statutes that it should apply only to specific pools or to specific wells in pools.

Various other recommendations also were made to the commission as for the elimination of requirements to secure permits before hooking up wells, metering of each well, etc.

James B. Balch, chairman of the State Utilities Commission, declared that the commission seeks to devise "rules equitable to the whole industry" and is interested only in working out a program to the best interest of all.

Commenting on criticisms of the utilities commission in refusing to grant permits for construction of gas pipe lines, he said, "When this commission was reorganized last February and the present personnel named, we decided not to grant permits until a complete survey of the state's developed gas sources could be made."

The survey, which will be completed this week, has been carried out by the U. S. Bureau of Mines in conjunction with the State Geological Department. Chairman Balch said that after the commission had been given time to study the data gathered in the survey that it would then entertain applications for permits.

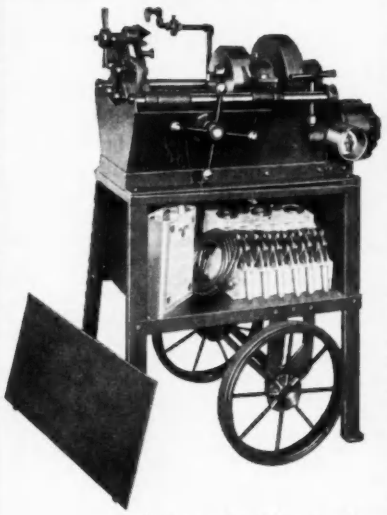
Following the all-day hearing, the Michigan Oil & Gas Association entertained the commissioners and Governor William A. Comstock at an evening banquet. Governor Comstock declared that he was pleased to hear from James C. Graves, chairman of the State proration Committee, that "Michigan oil operators are satisfied with the oil code and appreciate the benefits to the industry derived from it." The governor assured the association that when the time arrives for the lifting of the NRA code on the industry, that the state will "leave the regulation of the oil business to operators themselves."

Michigan Completions Slump to Total of Six

Mt. Pleasant, Mich. — Completions fell to six in Michigan for the week with Taggart Bro.'s Johnson 1, Mecosta County, initialing 8,900,000 cubic feet of gas from the Michigan Stray the outstanding new development. Johnson 1, located in Austin township, C-NE NW, Section 4, was completed at 1327 feet, topping Michigan Stray at 1313 feet. It marked the sixth commercial gas well completed in Austin township; the six wells having a combined initial production of 92,000,000 feet.

At present the field is served by only one four-inch pipe line running to Big Rapids, Michigan, where the market averages around a million feet daily. However, American Michigan Pipe Line Company, subsidiary of American Light & Traction Company, has started a survey for a 55-mile eight-inch line from the Austin field to Muskegon, Michigan, which will provide a market that may reach 10 million feet daily.

Johnson 1 was core-drilled into the Michigan Stray and operators now believe that this method may tend to mud off some of the gas. They had not com-



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pleted washing and cleaning out on the first gauge. Operators plan to re-open McKeough 7, Section 2, Austin township, and wash and clean out in an attempt to make a commercial producer. This test also was core-drilled into the sand and operators believe that this method may have mudded off a gas pay. The test was abandoned as non-commercial four weeks ago.

Company, Well and Location	Init. Prod. Bbls.	Depth
MIDLAND COUNTY—		
Davis Oil Co's Neitzke 8, Porter twp, nw nw nw, sec 21	1800	3398
Fred Stork's Brew 3, Porter twp, nw ne se, sec 20	75	3410
Fred Turner's Baxter 4, Porter twp, ne ne ne, sec 22	50	3425
Pure Oil Co's Coates 2, Greendale twp, nw nw nw, sec 17	25	3565
MECOSTA COUNTY—		
Taggart Bro's Johnson 1, Austin twp, ne nw, sec 4	¶9	1327
MUSKEGON COUNTY—		
Muskegon Oil Corp's Halter 1, Fruitport twp, sw sw sw, sec 22	*	2135

*Failures; †Junked; ¶Million cu. ft. gas.

Michigan Moves to Lower Its Production

Mt. Pleasant, Mich.—An earlier ruling of the State Proration Committee to maintain a five percent minimum prorate schedule was "temporarily set aside" August 6, by the committee when it became apparent either the prorate would have to be reduced or the base allowable runs reduced.

The August prorate schedule calls for a base allowable of 75 barrels per well and two percent of the excess of wells with potentials of more than 75 barrels. The July schedule had the same base figure but five percent for the excess. The committee pointed out that the reduced proration schedule is only a temporary measure and may be put back to five percent or more before the month closes.

The August potential was set at 179,355 barrels as compared to 180,436 barrels in July.

The proration schedule for August:

Pool	No. Wells	Potential	Runs
Porter	239	165,881	21,065
Yost	13	3,274	790
Greendale	308	3,854	3,854
Vernon	50	2,401	2,401
Leaton	26	563	563
Montcalm	3	2,416	440
Ogemaw	16	397	397
Saginaw	112	97	97
Lapeer	3	30	30
Oceana	14	63	63
Muskegon	157	379	379
Total	941	179,355	30,079

Isabella County

Mt. Pleasant, Mich.—Michigan Gas & Oil Company will deepen Marthey 1, Isabella County, Denver township, Section 19, from the Dundee horizon to the Sylvania, or approximately to 4600 feet. The test originally was completed in the Dundee at about 3700 feet in April, 1930, for 550 barrels a day. It was the discovery Dundee well in the Leaton pool.

Wittmer Oil & Gas Company also contemplates making a deep hole test on Archer 1, Isabella township, Section 11, which was recently completed as a two-barrel well from the Dundee at

Montcalm County

Mt. Pleasant, Mich.—Garfield Oil & Gas Company's Wymer 1, Montcalm County, Home township, Section 11, was destroyed by fire August 3. The test was drilling in the Michigan Stray sand when the fire broke out.

A second fire, believed to have started from lightning, caused extensive damages on Atha Oil Company's Fee lease in Lee township of Midland County the same day.

Eastern Fields Completions

PENNSYLVANIA

Company, Well and Location	Init. Prod. Bbls.	Depth
ALLEGHENY COUNTY—		
Sinclair Refining Co., Catherine Ryan 1	¶	4852
WEST VIRGINIA		
CALHOUN COUNTY—		
Mud Lick O&G Co., Meadows 2	*	....
GILMER COUNTY—		
McCall Drlg. Co., C. Gainer 4	¶	....
L. Gainer 5	5	....
MONONGALIA COUNTY—		
Housch Glass Co., Barrickman 1	¶	....
RITCHIE COUNTY—		
L. P. Bickel, Morris Bros. 1	*	....
Big Run O&G Co., Grant 1	¶	....
WOOD COUNTY—		
C. S. & L. Smith, McAatee 6	2	....
SOUTHEASTERN OHIO		
COLUMBIANA COUNTY—		
Penova Oil Corp., Clyde Conrad 1	2	740
JEFFERSON COUNTY—		
C. S. Kelley & Co., Ella Baxter 6	*	1014
Altamont Oil Co., Elmer Hardy 3	*	1520
HARDIN COUNTY—		
Kenton O&G Co., John McMahon 1	¶	1329
MONROE COUNTY—		
Ray Lynn & Co., P. W. Eddington 2	10	1656
Robt. Lewis, E. F. Flahaus 1	¶	1541
Hines Bros., Hines Bros. 5	1	697
MORGAN COUNTY—		
Mosier & Co., Chas. Yarnell 28	*	562
WASHINGTON COUNTY—		
Bowman Bros., Bowman Bros. 103	2	362
HANCOCK COUNTY—		
Carey Oil Co., J. Dillinger 1	*	....
WYANDOT COUNTY—		
Wood & Co., Edward Orton 1	60	1442
CENTRAL OHIO		
ASHLAND COUNTY—		
Robison & Co., Emma Deverna 7	5	669
Metzler & Co., Clark Albers & Co. 8	5	1400
Ohio F. G. Co., Vern Utz 1	¶	2882
Robison & Co., A. J. McClure 1	¶	....
ATHENS COUNTY—		...
Ohio F. G. Co., Alden A. Buck 1	¶	1638
COSHOCTON COUNTY—		
Preston Oil Co., A. J. & B. W. Beatty 2	30	3285
GUERNSEY COUNTY—		
Ferguson & McCully, Fred F. Foraker 4	¶	....
Ohio F. G. Co., Clark Foraker 1	¶	1466
LICKING COUNTY—		
E. J. Edman, Thos. Smith 4	*	782
McClay Bros., W. R. Bourne 1	10	....
Upham Gas Co., Chas. W. Babcock 3	80	2980
Blue Rock Oil Co., Rachael Freece 4	30	2926
Charles Vaughn, Henry Wilkin 1	5	699
LORAIN COUNTY—		
Wittmer O&G Co., L. M. Mennell 1	¶	2573
LAWRENCE COUNTY—		
Dennis Burnett, Chartiers Oil & Gas 1	¶	2760
MUSKINGUM COUNTY—		
Pure Oil Co., Frank McKee 3	10	3126
MEIGS COUNTY—		
Ohio F. G. Co., Jas. S. Titus 1	¶	998
Rutland Gas Co., L. M. Haley 1	¶	770

Company, Well and Location	Init. Prod. Bbls.	Depth
A. N. Bengel, D. A. Thomas 1	¶	1778
John Mayer & Co., Abner Price 1	¶	1912
MEIGS COUNTY—		
John Mayer & Co., Abner Price 1	¶	....
MEDINA COUNTY—		
Oko O&G Co., Henry Essig 63	8	....
E. R. Edson Sons Co., Ed G. Miller 48	5	....
D. A. Lake, P. & F. Weaver 13	*	....
KNOX COUNTY—		
Pure Oil Co., B. R. Basine 1	59	....
STARK COUNTY—		
White & Co., Jas. M. Snyder 1	¶	4152
Cable & Campbell, Avondale Inc. 1	*	4487
East Ohio Gas Co., Hoover Development 2	¶	4536
W. J. Pontius 2	¶	4607
MEDINA COUNTY—		
E. R. Edson Sons Co., E. G. Miller 49	3	....
S. Hartman 1	*	500
ILLINOIS		
CLARK COUNTY—		
Fred Knecht, Leon Stewart & Co. 7	2	....
MONROE COUNTY—		
Collins Oil Co., Stella Tansy 1	*	945
ST. CLAIR COUNTY—		
Stolberg & Co., Geo. Stolberg 1	*	220
INDIANA		
GIBSON COUNTY—		
Big 4 Oil & Gas Co., Atkinson 8	150	....
P. E. Hill, Rena Punphrey 1	*	1300
GREENE COUNTY—		
A. R. Morris & Co., H. B. Brown 1	*	1850
KNOX COUNTY—		
O. A. Thayer & Co., Elza Hall 2	*	900
SULLIVAN COUNTY—		
Yeager & Co., John Hunt 1	25	....
M. V. Yeager, Link A. Morris 1	*	....
PIKE COUNTY—		
Indiana SW O. & G. Co., N. B. Thomas 1	5	....
KENTUCKY		
DAVIESS COUNTY—		
Daley & Daley, R. O. Payne 1	*	....
HANCOCK COUNTY—		
Ivyton O&G Co., J. H. Smith 1	25	....
Sands Pet. Co., W. C. Smith 1	20	....
Jos. B. Mayer, Jess Stewart 1	75	....
OHIO COUNTY—		
Cumberland Pet. Sid Lancaster 2	100	....
W. E. Hupp & Co., J. W. O'Dell 4	95	....
Snowden-McSweeney, J. W. O'Dell 3	70	....
OHIO COUNTY—		
W. E. Hupp & Co., W. W. Johnson 1	*	750
Frank Richards 2	160	....
Lida Carter 2	*	750
Oscar DeWitt 1	*	550
Snowden-McSweeney, J. W. Peckenpaugh 4	100	....
Petroleum Co., C. H. Downs 1	50	....
Kentucky Nat. Gas Co., C. Duggins 1	75	....
McLEAN COUNTY—		
J. C. Miller & Co., Jim Hatfield 6	20	....
Mike Callas & Co., Ed. Wells 2	*	....
J. A. Aters & Co., Geo. Boles 2	*	....

*Failures; †Junked; ¶Million cu. ft. gas.

Drilling Reports on Important Wildcats

MICHIGAN

MIDLAND COUNTY—Greendale Lee Oil Dev.'s Hitsman 1, Lee twp, sec 13, sd 2550 ft. Howard Patterson's Haskins 1, Ingersol twp, sec 26, sd 840 ft. W. J. Sovereign's Mode 1, Geneva twp, sec 25, lcn.

ISABELLA COUNTY—Michigan Gas & Oil Co.'s Hanson 1, Rolland twp, sec 33, rog. Lupher Drilling Co.'s Baer 1, Broomfield twp, sec 36, dr 575 ft.

OGEMAW COUNTY — McClanahan Oil Co.'s Boutell 1, Ogemaw twp, sec 5, dr 420 ft. C. A. Perry's Wobig Heirs 1, Mills twp, sec 6, dr 2500 ft. W. C. Mee's Gibbs 1, Mills twp, sec 30, sd 2285 ft. Burks White's Canard 1, Mills twp, sec 22, rog.

MONTCALM COUNTY—Walter & Miller's Durbin 1, Crystall twp, sec 11, lcn. Rex Oil & Gas Co.'s Johnson 1, Home twp, sec 17, csg 5-in on Dundee; Albaugh 1, Home twp, sec 34, dr 2900 ft. Northern Oil Co.'s Robinson 1, Richland twp, sec 27, sd 460 ft; McGilvery 1, Richland twp, sec 34, sd 1300 ft. Tope-Blunt-Voorhee's Neff Ranch 1, Day twp, sec 22, dr 800 ft. Atha Oil Co.'s Davenport 1, Ferris twp, sec 16, dr 2700 ft. Mammoth Petroleum Co.'s Thomas 1, Home twp, sec 11, dr 760 ft. Garfield Oil & Gas Co.'s Wymer 1, Home twp, sec 11, sd 1350 ft. Allen Park Oil & Gas Co.'s Stephens 1, Home twp, sec 36, dr 350 ft. Daily Crude Oil Co.'s Gustavson 1, Home twp, sec 2, dr 1050 ft.

MECOSTA COUNTY—Hall La Mee Synd's Oliver 1, Martiny twp, sec 13, dr 900 ft. Bryan & Martin's Sheets 1, Millbrook twp, sec 35, dr 725 ft. Columbia Oil & Gas Co.'s Hutchinson 1, Hinton twp, sec 14, re-csg 1304 ft. Colmur Synd's Sapp 1, Morton twp, sec 6, rog. Gordon Oil Co.'s Garner 1, Millbrook twp, c se ne sec 32, lcn.

GRATIOT COUNTY—Mid State Dev.'s Yost 1, Bethany twp, sec 27, sd 3378 ft. Ithaca Oil & Gas Synd's Thum 1, Elba twp, nw se se sec 19, lcn.

GLADWIN COUNTY—Atlas Drilling Co.'s Cronk 1, Gladwin twp, sec 23, sd 125 ft. M. F. Whitehall's Kintner 1, Beaverton twp, sec 11, dr 200 ft.

ARENAC COUNTY — Oil States Corp.'s Sheffer 1, Mason twp, sec 18, dr 2750 ft. Oak Oil Co.'s Standish Bank 1, Standish twp, sec 19, dr 100 ft.

BAY COUNTY—A. H. Webber's Wasbinski 1, Kawkawlin twp, sec 10, sd 1700 ft. Ward J. Blunt's Koczara 1, Pinconning twp, sec 17, dr 150 ft.

NEWAYGO COUNTY—Newaygo Prospecting Co.'s Grass Lake Ranch 1, 16n-11w, sec 7, sd 3560 ft. Newaygo Oil & Gas Co.'s Bates 1, Sherman twp, sec 12, dr 6566 ft. Muskegon Development Co.'s Kolbe 1, Beaver twp, sec 31, dr 850 ft.

SAGINAW COUNTY—Chapin Oil Co.'s Sutlif 1, Chapin twp, sec 16, sd 950 ft. Fred Stork's Poultry Farm 1, Richland twp, sec 33, dr 125 ft. Smith Petroleum Co.'s Clement 1, Swann Creek twp, sec 8, dr 400 ft.

HILLSDALE COUNTY—B. D. Chandler's Brickner 1, Wright twp, sec 11, sd 1050 ft. Chas. Anderson's Cousens 1, Jefferson twp, sec 14, sd 835 ft.

MISCELLANEOUS—Osceola County: Sun Oil Co.'s Marble 1, Evart twp, sec 8, dr 1320 ft. Shiawassee County: John F. Hurley's Van Pelt 1, Rush twp, sec 35, dr 150 ft. Lenawee County: P. D. Snavely's Lindsay 1, Madison twp, sec 6, dr 100 ft.

CALIFORNIA

KERN COUNTY

BEUNA VISTA HILLS—E. C. Arnold's No. 1, 34-31-24, dr shale 4220 ft.

COMANCHE POINT—Comanche Oil Co.'s No. 1, 15-32-29, dr hard sandy shale 4230 ft. Tejon Ridge Oil Co.'s No. 1, 23-32-29, sd 200 ft.

EDISON—Lee Oil Co.'s Edison-Seale 1, 5-30-29, lcn. Mitchell-MacMillan Co.'s No. 1, 8-30-29, rig. Mountain View Dev. Corp.'s Spangler 1, 12-30-28, sd 4300 ft. Ohio Oil Co.'s Cauley 1, 36-30-29, spudded August 2.

LOST HILLS — Associated Oil Co.'s Williamson 1, 2-26-20, td 7858 ft, pb 6850 ft and swabbed mud, water and some oil.

McKITTRICK—Standard Oil Co.'s No. 45, 15-30-22, td 3653 ft, redr at 3395 ft. Welport Oil Co.'s No. 105, 26-29-21, to test on pump 1195 ft; No. 106, lcn.

MT. POSO—Associated Oil Co.'s Fortine 1, 30-27-28, rigged up. Ohio Oil Co.'s Brown 1, 22-27-21, lcn.

NO. SEMITROPIC — S. T. Alexander's Shields 1, 29-25-21, sd 1426 ft.

PIONEER ANTICLINE — Fisher & Welton's Harris 1, 35-11-23, sd 1156 ft.

TEMBLOR HILLS—Robt. Foster's No. 1, 2-32-22, dr shale 1063 ft.

WHEELER RIDGE—Badger Oil Co.'s El Tejon 1, 31-1-10, sd 6001 ft.

KINGS COUNTY

AVENAL—Carl Weller's Baby King 2, 11-23-16, co 1425 ft.

ALPAUGH—Trico Oil & Gas Co.'s Magee and Stone 1, 33-24-22, dr sandy shale 3196 ft.

TULARE LAKE DIST. — Armadillo Gas Co.'s No. 1, 32-22-20, wocs, td 1745 ft. Commonwealth Cons. Gas Co.'s No. 1, 21-22-20, dr shale 2000 ft; No. 2, rigged.

TULARE COUNTY

ALPAUGH—Mastodon Oil Co.'s No. 1, 27-24-23, material on lcn.

MADERA COUNTY

DOS PALOS—Pure Oil Co.'s Chowchilla 1, 7-10-14, dr sand and shale 5560 ft.

SAN JOAQUIN COUNTY

TRACY—Milham Exploration Co.'s Connolly 1, 5-4-5, preparing to abn 5800 ft.

SANTA BARBARA COUNTY

GOLETA—Shell Oil Co.'s Bishop 1, 20-4-28, dr hard shale 2110 ft. Hastain Stone's Simonds-Campbell 1, 9-4-28, sd 2785 ft.

LOMPOC—Lompoc Pet. Co.'s Beauterbaugh 2, 18-7-34, fsh 2975 ft.

LOS ALAMOS—Petroleum Securities Co.'s Hancock-Los Alamos 1, 31-8-32, spudded July 28.

SANTA MARIA—Union Oil Co.'s Moretti 1, 24-10-34, still testing on pump 37 bbls, 16.8 gr oil, td 2389 ft.

SISQUOC—Royalties Service Corp.'s Sisquoc 1, 35-9-32, rig.

SAN LUIS OBISPO COUNTY

CHOLAME—Willett Oil Assn's Jack 2, 10-25-15, dr shale 2260 ft.

TEMBLOR HILLS—Midway Peak Oil Co.'s No. 1, 3-32-22, dr hard shale 1291 ft.

VENTURA COUNTY

HOPPER CANYON—Commander Oil Co.'s No. 6-F, 13-4-19, to abn 3357 ft. Oil Ridge Oil Co.'s Moran 3, 1-4-19, co 973 ft.

LAS POSAS—Las Posas Pet. Co.'s Mahan 1, 22-3-20, td 7370 ft, pb 6750 ft, sd.

OJAI—A. N. Macrate's Cosmon 1, 27-4-23, dr hard shale 5265 ft. Rancho Oil's Rancho Santa Ana 1, 18-4-23, rig.

PIRU—Bolsa Chica Oil Corp.'s Snow 1-A, 4-4-18, td 2497 ft, pulled liner, to retest water shutoff; 6¼-in csg cmt at 2370 ft. Piru Oil Co.'s Holser 1, dr brown shale 945 ft.

SANTA PAULA—J. W. Mosher's No. 1, 22-4-21, dr shale 2162 ft.

SESPE—H. A. Ivers' No. 11, 1-4-20, co 1475 ft. Merchant Pet. Co.'s Cochran 4, 1-4-20, redr 840 ft, td 1280 ft. Sullivan & Roberts' No. 1, 28-5-19, wocs 7⅝-in csg 475 ft, td 804 ft. Topa Topa Oil Co.'s No. 1, 33-5-19, co 3030 ft.

SHIELDS CANYON—The Texas Co.'s No. 120, 4-3-19, dr shale 1597 ft.

SIMI—American Drilling Co.'s No. 1, 6-2-17, dr shale 575 ft. C. L. Anderson's No. 13, 36-3-18, ready to dr ahead 1150 ft. Williamson & Danaker's No. 1, 36-3-18, sd 1010 ft.

SULPHUR MOUNTAIN—Wm. A. Kirk's No. 5, 21-4-22, dr brown shale 2190 ft.

MISCELLANEOUS

FRESNO COUNTY—G & E Dev. Co.'s No. 1, 36-16-14, rig idle. Bergman Oil Co.'s Oro Loma 1, 12-12-11, fsh 6006 ft. Russ Oil Syn's No. 1, 28-12-11, sd 4020 ft.

YOLO COUNTY—Pacific Northern Gas & Oil Co.'s No. 1, 23-12-3, sd 6770 ft.

SOUTHERN CALIFORNIA

ARTESIA DIST.—Vanco Dev. Co.'s Millard 1, 25-3-12, rig.

ATHENS DIST.—Woodward Oil Co.'s No. 1, 12-3-14, testing formations, td 4952 ft.

BREA CANYON — Pressell - Perry - Tull's Baird 1, 30-2-9, dr hard sandy shale 3210 ft.

CARBON CANYON—Tehema Pet. Corp.'s Kramer 1, 33-2-8, sd 2226 ft.

EAST RICHFIELD—Midrich Drilling Co.'s Vejar 1, 26-3-9, dr hard brown shale 2818 ft.

FULLERTON—Union Oil Co.'s Fullerton Heights 1, 22-3-10, dr sandy shale 5380 ft.

HERMOSA BEACH—Oklahoma Oil & Gas Corp.'s No. 1, rur.

HUNTINGTON BEACH, on tidelands—Black Eagle Oil Co.'s No. 1-B, permit 194, 32-5-11, to redr from 1800 ft, td 3987 ft.

NEWPORT—Platt & Collins' No. 1, 14-6-10, dr hard shale 1980 ft. Pioneer Drilling Co.'s Banning 3, 29-6-10, co 6452 ft.

NO. LONG BEACH—Geo. L. Clayton's No. 1, 31-3-12, sd 6630 ft.

PICO—Frontier Oil Co.'s No. 1, 12-2-12, wocs, 12½-in csg 500 ft, td 1460 ft.

SAUGUS—International Oil Dev. Co.'s Powell 1, 34-5-16, dr hard sandy shale 2620 ft.

SURF—W. G. Bradford's B.B. 1, 19-6-10, bldg steel rig.

WEST WHITTIER — Midfield Oil Co.'s Walker 1, 19-2-11, sd 4867 ft.

SAN BERNARDINO COUNTY — Great American Pet. Co.'s Gapco A-1, 18-2-8, sd 2725 ft; Gapco B-1, sdtr, td 3100 ft; Gapco D-1, rur. Carl E. Brahy's Davis 1, Cajon Pass, rig.

IMPERIAL COUNTY—Imperial Carbon Ice Co.'s No. 1, near Salton Sea, lcn.

SAN DIEGO COUNTY—San Diego Gas Pet. Corp.'s No. 1, 32-18-2, wocs 11¾-in csg 4020 ft, td 4075 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completion and wildcat reports in THE OIL WEEKLY.

* —*dry hole, abandoned well.*
‡ —*salt water (completions).*
† —*junked and abandoned.*
¶ —*million feet of gas.*
abd —*abandoned.*
bbls —*barrels.*
br —*building rig.*
b.s. —*basic sediment.*
csg —*casing.*
co —*cleaning out.*
dd —*drilling deeper.*
dk —*derrick.*
dr —*drilling.*
fsg —*fishing.*
ft —*feet.*
hfw —*hole full of water.*
in —*inches.*
lcn —*location.*
m —*milling.*
mim —*moving in materials.*
mit —*moving in tools.*
mot —*milling on tools.*
n, s, e, w, —*north, south, east, west.*
oih —*oil in hole.*
owdd —*old well drilling deeper.*
owpb —*old well plugging back.*
pb —*plugged back or plugging back.*
r —*reaming.*
rog —*rig on the ground.*
rur —*rigging up rotary tools.*
rust —*rigging up standard tools.*
sd —*shut down.*
sdtr —*sidetracking.*
sg —*show gas.*
si —*shut in.*
so —*show oil.*
so & g —*show oil and gas.*
spd —*spudding.*
sr —*straight reaming.*
sw —*salt water.*
td —*total depth.*
ur —*underreaming.*
wih —*water in the hole.*
wo —*workover.*
wocs —*waiting on cement to set.*
wosr —*waiting on standard rig.*

OKLAHOMA

ALFALFA COUNTY—Tex-O-Kan Development's Acre 1, csw ne 14-24n-11w (owdd), td 6460 ft, swab to 5530 ft, recovered 40 bbls oil and water, sd.

ATOKA COUNTY—L. A. Fitts' Blankenship 1, ne nw 19-3s-10e, td 651 ft, machine moved out. Balernee et al's Greenville National Bank 1, nw se 36-2s-13e, sd 2150 ft. Brookshire et al's Rowland 1, nw ne ne 18-3s-10e, fsg 3695 ft. T. C. Ramler et al's William Roberts 1, sw se sw 6-2s-12e, dr 310 ft. T. A. Edgerly's Donham 1, se nw 26-1n-15e, ru.

BECKHAM COUNTY—Price & Watchorn's Heard 1, ne sw 17-8n-26w, so 1506 ft, sg 1530-1535 ft, set 8-in csg 1582 ft, dr 1585 ft.

CADDO COUNTY—Denver P. & R. Noe 1, nw sw sw 34-10n-10w, fsh, made one flow est. 200 bbls.

CARTER COUNTY — Hudson & Poland's Sullivan 1, ne se 5-5s-1w, so 3760-3773 ft, dr 3900 ft. George Pace et al's M. Jack 1, ne nw nw 10-4s-4w, sd. Daphine Oil Co.'s Hooks 1, se nw nw se 5-1s-2w, sd 1350 ft. McHenry et al's Ratliff 1-A, nw sw 28-1s-2w, shut in 5 days, pumped 10 bbls first 7 hrs, sd. Carter Oil Co.'s Bonner 1, sw se se 19-3s-2w, lcn.

CLEVELAND COUNTY — Phillips Petroleum Co. et al's Community-Baker 1, cse nw 11-9n-2w, fsg 7432 ft.

COAL COUNTY—J. D. Petty Oil Co.'s McMillan 1, sw nw ne 16-1s-8e, machine.

COMANCHE COUNTY — F. F. Stevens' Green 1, se sw 2-1n-13w, dr 1200 ft. Heiden-Taylor Crutcher 2, c nw 11-1n-12w, dr 668 ft.

COTTON COUNTY—Ben Russell's Fowler 1, se nw 21-4s-12w, D&A.

GRADY COUNTY—Mid-Western Oil, Inc., Carter 1, nw ne se 32-3n-7w, cored 2760-65 ft, so 2798-2800 ft, dr 2900 ft.

HARPER COUNTY—Sinclair Prairie's Neff 1, nw se 21-26n-24w, sd 265 ft.

HUGHES COUNTY—Olympic Oil Co.'s McCaslin 1-A, se nw nw 12-9n-8e, td 3442 ft, 142 bbls 7 hrs, flowed 162 bbls 8 hrs, est. 1 bbl per hr. Smith et al's Farmer 1, ne nw 32-5n-9e, dr 650 ft. Turner et al's Williams 1, sw sw sw 35-7n-10e, rig.

JACKSON COUNTY—Gypsy Oil Co.'s Kelly 1, nec 10-1n-20w (owpb), td 1673 ft, abd. Gypsy Oil Co.'s 1-A (twin), ne ne ne 10-1n-20w, rigging core drill. Ben Russell's Buttler 1, nw se 30-1n-22w, dr 800 ft. Gypsy Oil Co.'s Johnson 1, se nw sw 11-1n-20w, moving in rotary.

KAY COUNTY—Carter Oil Co.'s Cline 1, se sw se 16-28n-5e, dr 2393 ft. Helmerich-Payne's Crouse 1, cne sw 29-25n-1w, cellar.

KINGFISHER COUNTY—Jadeka Development Co.'s Frakes 1, csw ne sw 16-15n-6w, set 8-in csg 5100 ft, sd 5112 ft.

KIOWA COUNTY — Bailey & Johnson's Potts 1-A, cel nw nw sw 31-7n-14w, td 580 ft, D&A.

LEFLORE COUNTY—East Oklahoma O&G Co.'s Metcalf 1, swc 2-4n-26e, dr 1603 ft.

LINCOLN COUNTY—L. G. Hulse's Sloan 1, sw nw se 19-17n-3e, sd 885 ft. The Texas Co.'s Gessman 1, se ne 33-14n-4e, 63 bbls 15 minutes and quit flowing, to rip pipe 3025 ft. Mid-Continental Co.'s Bolby 1, cse sw 27-12n-2e, dr 550 ft.

LOGAN COUNTY—W. N. Anthony's Fruin-Eckman 1, se sw 4-16n-1e, bailed down to 3500 ft, sg, sd. Gypsy Oil & Sinclair Prairie's Manning 1, cnw nw 3-17n-4w, dr 190 ft.

McCLAIN COUNTY—Denver P. & R. Co.'s Newborn 1, cse sw 22-5n-1e, fsg 6355 ft.

MURRAY COUNTY—T. E. Revels et al's Wolfe 1, nec 18-1n-2e, sd 2545 ft. Gilcrease Oil Co.'s Brown 1, swc 26-1n-2e, fsg 1742 ft. Ed Golt et al's Aetna Life Insurance 1, se nw nw nw 14-2s-3e, lcn, tools on ground.

NOBLE COUNTY—Magnolia's Crawford 1, se nw 27-21n-2e, dr 4593 ft. Continental Oil Co. et al's Bennett 1, se nw 19-20n-1w, pb to 5078 ft, bailing and co. Vaughn Development Co.'s Loula 1, ne se sw 16-22n-1e, dr 2494 ft. Stanolind et al's Voss 1, sw ne se 28-22n-2w, td 4919 ft, pinched in to 500 bbls day, comp.

OKFUSKEE COUNTY — Delton Oil Co.'s Fixico 1, sec 7-11n-8e, dr 4290 ft. Carter Oil Co.'s W. H. Dill 1, cnw se 2-1n-8e, set 8-in csg 3374 ft, sso and g, td 3408 ft, wocs.

OKLAHOMA COUNTY—Gypsy Oil Co. et al's Community-Grant 1, cse nw 27-13n-4w, pb to 6945 ft, bailing out 1300 ft.

OSAGE COUNTY—Empire Oil & Refining Co.'s 1, se ne 3-25n-3e, sd 3824 ft.

PITTSBURGH COUNTY—Arkoma's Cummings 1, nw ne se 29-4n-14e, fsg 1490 ft.

PONTOTOC COUNTY — Riddle et al's Barnes 1, se nw se 21-5n-4e, sd 2910 ft. Boyle et al's Newborn 1, se ne 31-5n-4e, 2240 ft sd. Jarnett Petroleum's Johnson 1, se nw 28-4n-4e, sd 1269 ft. Gillette & Kroeger's Duver 1, ne se 1-1n-6e, dr 400 ft.

POTTAWATOMIE COUNTY — Stanolind O&G Co. & Amerada Petroleum Co.'s Goodman 1, se ne ne 5-10n-4e, set perforated 7-in liner and connecting up. Phillips-Gypsy et al's Flynn 1, ne nw 17-6n-3e, Belle City 2760 ft, td 4325 ft.

SEMINOLE COUNTY — Wrightsman Oil Co.'s Smith 1, nw se 25-10n-7e, sso and water 3632-3675 ft, dr 4110 ft. Moran et al's Brindle 1, sw ne 27-6n-5e, spudding. W. D. Griss et al's Kenyon 1-A, cne se 24-8n-4e, rig. Harmon Oil Co.'s Bowlegs 1, se ne sw 1-7n-7e, td 1655 ft, pulling pipe. Harris-Haun Harjo 1, ne se nw 11-6n-6e, (owdd), otd 2935 ft, ripped 6-in csg 2112 ft, flowed 133 bbls, fsg 2112 ft. Tate & Starbuck, Heard 1-A, se nw 9-6n-7e, dr 535 ft.

STEPHENS COUNTY — Carter Oil Co.'s Hilderbrand 1, csw se ne 1-3s-7w, sso at 2051-53 ft, dr 2940 ft. Carter Oil Co.'s T. H. McCasland 1, cnw nw sw 22-1s-4w, rig, waiting on tools.

WASHITA COUNTY — Oklahoma Mid-Western's Dock 1, swc 21-8n-18w, fsg 2400 ft.

KANSAS

BARBER COUNTY—Lario et al's Whelan 1, cnw 32-31s-11w, set 8-in csg 4345 ft, sso 4356-58 ft, 1M gas, td 4435 ft. I. T. I. O. et al's George 1, cse sw 12-33s-10w, dr 3450 ft.

BARTON COUNTY—Atlantic Oil Production Co.'s Straub 1, cse nw 36-18s-11w, set 5-in csg 3285 ft, so 3294-96 ft, td 3313 ft, swab 2 bbls per hr, sw, pb to 3310 ft, 1000 gals acid. Harris-Haun & J. Brouk's Dietz 1, se se se 21-16s-15w, set 12-in csg 1057 ft, co. Atlantic Oil Co.'s Vaniman 1, cse ne 15-20s-12w, cellar. Gypsy, Atlantic & Shell's Batchman 1, csw ne 18-20s-11w, spudding. National Refining Ingersoll 1, cne ne 2-19s-13w, sd. Murphin & Downing's Lanterman 1, nw se 15-19s-11w, rig and timbers.

CLAY COUNTY—Seidel Bros.' Younker 1, cs ½ se nw 21-9s-4e, sd.

COWLEY COUNTY — Routh & Farrout's Fox 1, se sw 35-30s-7e, set 12-in csg 845 ft, set 10-in csg 1300 ft, set 8-in csg 1540 ft, set 6-in csg 2234 ft, dr 2244 ft. National Refining's Robinson 1, ne se ne 11-34s-4e, fsg 1470 ft. Ostat et al's Eckhardt 1, se se nw 5-35s-6e, br. Wakefield's Weigle 1, se se 6-32s-6e, br.

DICKINSON COUNTY—Dutch Oil Co.'s Phillips 1, cne nw 15-15s-1e, sd.

ELLSWORTH COUNTY — Elwell et al's Campbell 1, sw cor 20-17s-7w, spudding 325 ft.

GREENWOOD COUNTY—Greeley et al's Salter 1, sw se sw 28-25s-12e, dr 335 ft.

HARPER COUNTY—Wood Brothers' Anthony 1, csw sw 17-31s-9w, sd 4475 ft.

HARVEY COUNTY—Hollow et al's Swafford 1, nw ne nw 8-22s-1w, set 10-in csg 2150 ft, dr 2365 ft.

KINGMAN COUNTY — W. C. McBride's Wooleridge 1, nw ne 16-27s-7w, set 13-in csg 1767 ft, dr 2450 ft.

McPHERSON COUNTY — Palmer & Phillips' Moddelmog 1, ne ne nw 8-21s-1w, ru. Marileen O&G Co. & Goering Bros.' Decker 1, nw se 20-18s-1w, set 10-in 1995 ft, 8-in at 2201 ft, dr 2280 ft.

NEMAHA COUNTY—Rose Oil et al's Penwell 1, ne nw se ne 16-3s-3e, (owdd), otd 1720 ft, ru and sd.

RENO COUNTY—Sinclair Prairie Oil Co.'s Sheperd 1, se nw 22-26s-9w, set 4-in liner td 4364 ft. L. H. Wentz Metcalf 1, se ne sw 2-24s-7w, set 6-in csg 3407 ft, dr 3445 ft.

RENO COUNTY—Hartman Oil Co. et al's Stone 1, cnw nw 15-24s-4w, br.

RICE COUNTY—Langston et al's Markle 1, ne ne sw 1-20s-9w, sd. Robertson et al's Johnson 1, nw sw 22-19s-8w, dr 2780 ft. Reserve Development Co.'s Heinz 1, ne sw se 8-18s-10w, abd. Deitrick et al's Fitzpatrick 1, cne ne 30-21s-8w, dr 2692 ft. Elwell et al's Porter 1, ne nw 5-18s-7w, set 15-in csg 350 ft, dr 985 ft. Gypsy Oil Co.'s Gibson 1, sw nw ne 4-21s-10w, ru. Darby et al's Taylor 1, nw se sw 25-19s-8w, spudding at 200 ft.

ROOKS COUNTY—Ashby et al's Doughty 1, csw sw 15-8s-19w, set 8-in csg 2473 ft, hfw 2710 ft, set 6-in csg 2729 ft, dr 2760 ft. Phillips Petroleum Corp.'s Depita 1, csw sw 31-8s-17w, set 7-in csg 3345 ft, td 3345 ft, co.

RUSSELL COUNTY — Lario Oil & Gas Co.'s Neidenthal 1, nec 23-14s-15w, set 10-in csg 888 ft, dr 1660 ft. Eldorado Refining Co.'s Stratman 1, sw se se 32-14s-11w, lcn.

SEDGWICK COUNTY—Trees Oil Co. & Derby Oil Co. et al's McMinn 1, nw sw ne 36-26s-1e, sd 2219 ft. Sovereign Oil Co.'s Nichols 1, c nw se 20-25s-1w, hfw 2715 ft, set 5-in csg 2738 ft, td 2740 ft, co. Jones, Kirk et al's McQuillan 1, ne nw ne 21-29s-2w, spudding.

SUMNER COUNTY — Morgan & Flynn's Mercer 1, nw ne nw 36-32s-1w, td 3706 ft, ur 6-in csg. Wentz & Continental's Small 1, nw sw 5-33s-4w, fsg 1365 ft.

TREGO COUNTY—Alma Petroleum Co. et al's Rhodes Estate 1, csw sw 14-11s-23w, 4222 ft, hfw, to pb. Mid-Kansas Oil Co.'s Kline 1, sw se 19-14s-24w, dr 1240 ft.

MONTANA

BIG HORN—Enterprise and Baker Drilling Co.'s Lynde 2, sw nw se 21-6s-35e, trying for water shutoff at 3550 ft.

CASCADE COUNTY—C. L. Smith's Benton Lake 1, ne ne sw 14-22n-2e, dr at 150 ft.

FERGUS COUNTY — H. G. Rowland's Woodward 1, se se sw 20-14n-24e, dr at 2815 ft.

GLACIER COUNTY—Barmac Prod. Co.'s Bruning 1, c sw sw 1-31n-5w, dr at 2712 ft.

JUDITH BASIN COUNTY—Fletcher E. Hunt's Oregon 1, sw se 20-14n-15e, waiting on 6⅝-in csg to run to bottom at 1040 ft.

LIBERTY COUNTY—J. H. Hamilton's Northern Farms 1, c ne sw 10-37n-5e, dr at 810 ft.

PETROLEUM COUNTY—Guy Smith's No. 1-A, se se 3-13n-26e, dr at 1630 ft.

TETON COUNTY—Bruce Radigan and E. K. Cheadle's Balsinger 1, ne se nw 20-27n-5w, dr at 2320 ft.

WYOMING

CARBON COUNTY—Earl W. Reader, Inc.'s, Union Pacific 1, c sw sw 19-20n-77w, ur csg to bottom at 5200 ft.

EMERY COUNTY—Ramsey Petroleum Corporation's Weightman 1, ne nw 15-26s-7e, dr at 2170 ft.

FALL RIVER COUNTY—Hollingsworth & Muller's Test 1-X, sw ne se 20-10s-4e, dr at 3278 ft.

FREMONT COUNTY—Mid-American Oil Co.'s Government 1, ne sw 4-28n-98w, dr at 1000 ft. Sidney H. Keoughan and Monongahela Oil Co.'s Wisda 1, ne se se 13-28n-83w, dr at 2780 ft.

HOT SPRINGS COUNTY—California Exploration Co.'s Government 1, ne se ne 12-44n-98w, dr and carrying 10-in csg at 1775 ft.

LOGAN COUNTY—D. J. Carter's test 1, sw sw nw 26-31n-72w, recementing 6⅝-in csg at 2093 ft.

SHERIDAN COUNTY — Sheridan Syndicate's Allison 1-A, 1½ se¼ se¼ 15-55n-85w, dr at 1130 ft.

COLORADO

FREMONT COUNTY—Waterville Oil Co.'s State 1, sw se 16-18s-69w, Phantom Canyon, sd for csg at 2800 ft.

JACKSON COUNTY—Continental Oil Co.'s Government 3, nw ne 34-9n-78w, plugging back and straightening hole at 300 ft.

PARK COUNTY—South Park Oil & Gas Co.'s Esche 1, se se nw 5-9s-76w, Como district, pb to abdn at 2465 ft.

PROWERS COUNTY—Trojan Oil & Gas Co. Lotus 1, nw ne ne 15-23s-46w, Lamar district, dr at 3495 ft.

ADAMS COUNTY—Riddle Petroleum Co.'s Baxter 1, c sw 2-3s-66, new location on the Derby Dome structure, 10 miles northeast of Denver, is erecting 122-ft steel derrick. Test will be drilled with rotary tools and contract calls for 9000 ft.

NEW MEXICO

EDDY COUNTY—E. B. Guess' McIntosh 1, nw nw 8-26s-28e, Red Bluff area, dr at 1210 ft. Pecos Drilling Co.'s McIntyre 1, nw nw 27-23s-25e, dr at 2890 ft.

SAN JUAN COUNTY—Reserve Oil Co.s test 4, se se 36-22n-14w, Stoney Butte structure, 50 bbls high gravity crude at 818 ft.

TORRENCE COUNTY—Bruce Frazier et al's Frazier 1, c se sw 20-21s-13e, dr at 400 ft.

ARKANSAS

CALHOUN COUNTY—R. J. McMurry et al's Calion Lbr. Co. 1, sw ne 3-16-14, spd dr 480 ft.

FULTON COUNTY—Salem Dev. Co.'s I. S. Stephens 1, sw se 31-20-7w, no report.

HEMPSTEAD COUNTY—Arkansas Drilling Co.'s Jones 1, ne se 11-14-24, wocs 10-in csg 160 ft. Dr. E. L. Austin's J. W. McWilliams 1, nw sw 19-13-23, sd repr rig, 700 ft. F. W. Martin & Co.'s Lafferty 1, se nw 17-14-24, spd 10-in csg 110 ft.

LA FAYETTE COUNTY—A. L. Erwin et al's Bodcaw 1, ne ne 19-16-23, spd dr 1230 ft. Earl F. Fox's Coleman Bros. 1, nw ne 36-16-25, dr 2520 ft. W. H. Harvey's A. M. Allen 1, ne sw 18-19-24, rur. Douglas Lawn's Camp 1, sw se 14-15-23, dr 2590 ft. C. V. Lenz's Huston 1, 19-15-25, mim.

MADISON COUNTY — H. L. Scott's Hughes 1, 14-15-25, dr 700 ft.

MILLER COUNTY—Beverley Oil Co.'s Commercial Nat. Bank 1, ne se 30-17-28, dk. W. F. Lacey's Gibson 1, sw nw 30-19-27, sd 3808 ft. King Oil Corp.'s Schroder 1, sw ne 24-14-28, dr 2122 ft. Bloomburg Oil Corp.'s Patterson 1, se ne 5-19s-28w, spd.

NEVADA COUNTY — Ira Gee's Scott 1, sw nw 23-10-22, dk.

UNION COUNTY — Alexander-Head Oil Co.'s Union Sawmill Co. 1, sw nw 28-17-13, arr test 2610 ft. Mrs. R. K. Jones' J. Davis 1, nw nw 28-16-14, arr test 2765 ft.

FLORIDA

DADE COUNTY—East Coast Oil & Nat. Gas Co.'s Warick 1, 12-55s-40e, owdd. Miami, Fla., Oil Co.'s Chevalier Corp. 1, 19-54s-35e, fsg 4565 ft.

HILLSBORO COUNTY — Southern Pet. Co.'s Mizell & Williams 1, 4-32s-21e, dk and mim.

WALTON COUNTY—Oil City Corp.'s Walton L. & T. Co. 1, 12-1n-19w, sd 4850 ft in new hole.

MISSISSIPPI

CLARKE COUNTY—Clarke County Oil Co.'s S. B. Kirkland 1, 10-2n-10e, dr under surf csg set at 133 ft.

HANCOCK COUNTY—Gulf Ref. Co.'s R. J. Williams 1, ne ne 11-8s-15w, sd 2750 ft.

JONES COUNTY—Snow-Black Pet. Co.'s Watson 2, ne sw 24-7n-13w, sd 2550 ft in sand.

LAMAR COUNTY—German & Hix's J. J. Newman Lbr. Co. 1, sw ne 21-4n-15w, dk and mim.

LAUDERDALE COUNTY — Dalton Dev. Co.'s Bounds 1, 34-7n-15e, dk and mim.

MONROE COUNTY — Miss. Pub. Serv. Corp.'s Edwards & Carter 1, ne se 12-13-18, rog. P. J. McAlpine's Chas. Rye 1, se sw 22-15-17, arr shoot formation, td 2917 ft.

PEARL RIVER COUNTY—Gulf Ref. Co.'s May L. Williams 1, se ne 35-5n-17w, dr plug in 6⅝-in csg at 3696 ft, td 3707 ft. Goodyear Yellow Pine Lbr. Co. 1, nw nw 21-3s-17w, spd dr 500 ft.

RANKIN COUNTY—Love Pet. Co.'s Pearl-River-Interior Lbr. Co. 1, sw sw 15-6n-2e, fsg td 3560 ft.

SCOTT COUNTY—R. W. Woods' W. R. Rogers 1, ne ne 4-5n-6e, spd.

SIMPSON COUNTY—Berry Corp.'s Berry 2, sw sw 33-2n-4e, wocs 6⅝-in csg 2048 ft.

WINSTON COUNTY—Jack Vale's Moody 1, 10-13n-14e, dk.

NORTH LOUISIANA

BIENVILLE PARISH — Saline Drilling Co.'s Pardee 1, ne ne 27-14n-6w, wocs 10-in csg 142 ft.

BOSSIER PARISH — Jno. L. Anderson, Tr.'s, Leonard 1, sw sw 19-19n-13w, dr 3540 ft. Producers O&G Co.'s W. H. Werner 1, se se 7-17n-11w, sr 3984 ft. L. M. Moffitt et al's W. H. Martin 1, sw sw 31-22n-11w, spd.

CADDO PARISH—Burkett O&G Co.'s Lindholm 1, ne se 15-17-14, sd 1450 ft.

CALDWELL PARISH—Terrell & Price's La. Central Lbr. Co. 1, nw ne 18-11n-3e, dr 3155 ft, elev 206 ft.

DE SOTO PARISH—Hester et al's Alston 1, ne sw 11-11n-16w, spd 10-in csg 60 ft. Jack Clark's Moore 1, ne nw 1-13n-15w, sd for water 1670 ft. E. T. Oakes' Johnson 1, ne nw 30-13n-15w, gas show 5397-5400 ft, arr ds test 5402 ft. Geo. LeGrand's Mrs. E. Vance 1, swc se 34-12-16, rur.

NATCHITOCHES PARISH—Clyde Creighton's Friedman Est. 1, swc 52-7n-6w, owdd. Matthew Forman's Poissoit 1, 9-10n-8w, rog. Roy Raines et al's Fee 1, sw sw 28-9n-10w, sd for csg 2275 ft. Hickman et al's Page Est. 1, se nw 18-8n-9w, dr 1544 ft. (Formerly J. B. Storey, Tr.'s test.)

RER RIVER PARISH—Kopp et al's R. M. Thomas 1, 34-13n-8w, arr res 740 ft. W. K. Williams' De Moss 1, ne ne 33-13-11, 8 ft sand tested sw & sg pb into csg td 2468 ft.

SABINE PARISH—Tex-La-Ark Oil Co.'s Pickering Lbr. Co. 1, ne sw 3-3n-12w, dr rock 2188 ft.

WEBSTER PARISH—Gulf Ref. Co.'s Tom Crichton 1, ne sw 15-18n-9w, spd 10-in csg 502 ft.

WINN PARISH—Red River Ref. Co.'s Tremont Lbr. Co. 2, se se 26-11n-1w, spd 10-in csg 64 ft.

LOUISIANA GULF COAST

ACADIA PARISH—Woodley Pet. Co.'s Daigle 1, sec 24-7s-1e, cor sand and shale 7330 ft.

BEAUREGARD PARISH — Federal Pet. Co.'s Lutcher Moore 1, sec 4-7s-12w, D&A 8722 ft. Same operator's B-1, sec 26-6s-13w, dr sand 5028 ft.

CALCASIEU PARISH — Union Sulphur Co.'s Barbee Est 2, sec 11-9s-8w, dr shale 7151 ft.

CAMERON PARISH—The Texas Co.'s Calcasieu Lake 1, sec 1-14s-9w, dr anhydrite 6704 ft.

IBERIA PARISH—Grosse Tete Dev. Co.'s Augelloz 1, sec 54-12s-7e, sd 2270 ft.

LA FOURCHE PARISH—Barnsdall Oil Co.'s Harang Plantation 3, La Rose prospect, sec 97-17s-20e, dr shale 3215 ft. R. L. Gay Tr.'s Gedchaux 1, near Raceland, dr shale 6062 ft.

PLAQUEMINES PARISH—E. A. Howe's Buras Levee 1, sec 26-21s-30e, sd 1500 ft.

RAPIDES PARISH—Ben Banner's Bentley Lbr. Co. 1, sec 11-4n-5w, sd 3000 ft. C. D. Lowe's Barret, northern edge of Rapides Parish, sec 40-5n-1w, lcn.

ST. BERNARD PARISH—John Danciger's Battles 1, sec 135-14s-14e, dr gumbo 350 ft.

ST. MARTIN PARISH—The Texas Co.'s St. Martin Ld. Co. 6, sec 17-8s-7e, dr lime 7953 ft.

ST. MARYS PARISH—Edwards Drilling Co.'s Chetemaches 1, sec 34-13s-9e, sd 6500 ft.

VERMILION PARISH—J. C. & Lon Moore's Breussard 1, sec 32-11s-3e, dr sand 2435 ft.

EAST TEXAS

ANDERSON COUNTY—Canadian Production Co.'s Mrs. R. M. Jackson-Amerada 1 (387-ac), Manuel Rionda sur, elev 333 ft, Pecan chalk 2940-3011 ft, broken chalk to 3188 ft; Austin chalk 4080-4466 ft; to Woodbine sand 4789 ft, salty taste, cor 4820 ft. H. L. Hunt Prod. Co. et al's O. M. Dorsey (Miller-Temple) 1, (196.64-ac), S. Sanchez Sur. No. 2-10, Long Lake area, elev 292 ft, cem 9⅝-in csg 2236 ft. J. A. Johnson et al's Mrs. M. B. Huffman 1 (170-ac), R. S. Patton sur, elev 265 ft, rig. J. W. Luttes et al's C. McKee 1 (100-ac), W. F. Pool sur, lcn. Sun Oil Co.'s Robt. N. Erskine 1 (5203-ac), Sam C. Box sur, Navarro Crossing, elev 202 ft, Pecan chalk 4142-4390 ft, Austin chalk 5248-5556 ft; dr shale 5810 ft.

CASS COUNTY—John R. Hadley et al's Ray Bryan 1 (80-ac), Al Latimer sur, elev 343 ft, Pecan chalk 2316-2638 ft, sd 2965 ft. United Production Corp.'s T. J. Walton 1, J. Coleman sur, Pecan chalk 2079-2421 ft, top anhydrite 4921-5442 ft, cor 5580 ft.

CHEROKEE COUNTY—Leon English & H. C. Milhoan Drlg. Co.'s O. R. Perkins 1 (80-ac), J. Montez sur, elev 416 ft, fish drill pipe 2450 ft. Walter L. Goldston et al's Southern Pine Lumber Co. 1 (80-ac), N. Newton sur, Rusk pool, dr 2970 ft. H. L. Hunt Prod. Co.'s T. R. Black 1 (50-ac), D. W. McNabb sur, Rusk pool, lcn. Jacksonville O&G Co.'s H. D. Henderson 1 (40-ac), J. Pineda sur, elev 409 ft, rig. Wm. McCulloch-Ed. Zilkey & K. Hughes' J. C. Bradford 1 (50-ac), J. Armendaris sur, sd in chalk 3815 ft. Arch Rowan-Roy Nichols-Simms Oil Co.'s C. V. Gilbreath 1 (60-ac), H. M. Brewer sur, Reklaw area, lcn. Smith-McRea et al's John M. Tipps 1 (130-ac), B. W. Heath sur, dk. South Gulf Oil Corp. et al's Joe Bailey-Hagelstine 1 (80-ac), L. Rhodes sur, A-724, elev 386 ft, Pecan chalk 3125-3532 ft; top Austin chalk 3878 or 3974 ft to 4153 ft, cor 4160 ft. T. J. Wood-R. M. Young et al's New Birmingham Dev. Co. 2 (161-ac), Levi Jordan sur, Rusk pool, elev 440 ft, Pecan chalk 3998-4442 ft; Austin chalk 4895-5122 ft; Woodbine sand carried sw, D&A 5163 ft.

FRANKLIN COUNTY—Humble O&R Co.-Ed. B. Hopkins et al's F. David-M. & P. Bank 1 (200-ac), John Askey sur, elev 365 ft, Pecan chalk 1225-1325 ft, top Woodbine 3041 ft, D&A in sw sand 3336 ft.

FREESTONE COUNTY—Walter M. Buress et al's J. B. H. Orand 1 (50-ac), W. M. C. Jones sur, 1¾ mi n Fairfield, lcn. American-Liberty Oil Co.'s Trinity Farm Securities Co. 1 (20-ac), G. B. Bonham sur, sw of Cayuga field, elev 255 ft, Pecan chalk 2200-2400 ft; Austin chalk 3218-3635 ft; D&A in Woodbine sand section 4042-4128 ft. Clyde Creighton et al's W. A. Holley 1 (80-ac), A. B & M. sur, elev 399 ft, top sand 5734-5740 ft, sd for repairs. Walter L. Goldston et al's E. M. & C. H. Watson 1, R. D. Price sur, lcn. J. E. Milburn & J. B. Patty's S. E. McAshan 1 (40-ac), S. G. Diaz sur, Blk. 178, sp and sd. Trinity Farm Securities Co. (E. P. Harwell's) Fee 1 (80-ac), R. M. Williamson sur, sw of Cayuga field, elev 253 ft, Pecan chalk 2195-2331 ft; Austin chalk 3228-3575 ft, top Woodbine section 3888 ft, pb from 4045 to make gasser.

HENDERSON COUNTY—Great State Oil Corp. (Dick Andrade, III) R. Sid Ansley 1, N. B. Thompson sur, top Pecan chalk 1711 ft, dr 2010 ft. J. C. Crosby & Culp's M. T. Todd 1 (160-ac), Geo. Aldrich sur, 4 mi e of Malakoff, dr 620 ft. Wm. C. McGlothlin et al's R. E. L. Knight 1, C. Armstrong sur, 3 mi w of Trinidad, lcn.

HOPKINS COUNTY—D. A. Hale et al's L. M. Hall 1 (70-ac), A. Caro sur, A-143, elev 506 ft, sd 640 ft.

HOUSTON COUNTY—Boone et al's Trinity State Bank 1 (142-ac), Chas. McHenry Ellis sur, elev 298 ft.

HUNT COUNTY—G. S. & S. Oil Co.'s Oscar Popper 1, Jas. Moore sur No. 544, top Gober chalk 900 ft, sd 1695 ft. L. G. Priest et al's A. Barnett 1 (212-ac), J. C. Hamer Sur. A-417, rig.

LEON COUNTY—Killough & Tucker's G. B. Young 1 (100-ac), Jas. M. Boone sur, Pecan chalk 3950-4070 ft; dr 4220 ft. Normangee Corp. (C. W. Battaile's) B. F. Henry 1 (125-ac), R. Rogers sur, sp and sd.

LIMESTONE COUNTY—J. P. Davidson et al's J. M. Childs 1 (60-ac), J. Nelson sur, Blk. 3, lcn. Don S. Foster et al's C. O. Wright 1 (2-ac), Sorrel McAnulty sur, rig. Peyton Bros. et al's Jake Steubenrauch 1 (246-ac), Pedro Varela sur, Trinity sand test on w side Mexia field, elev 541 ft, Austin chalk 2760-3139 ft; top Georgetown lime 3996 ft, dr 4050 ft. J. E. Schultz et al's Roy Ward 1 (23-ac), Harrison York sur, dk. Stanley Thompson (was C. C. Curtis & J. E. Winans') Emma Daniel Johnson 1 (41½-ac), Pedro Varela sur, jkd 2960 ft, skid rig.

MORRIS COUNTY—H. N. H. Drlg. Co.'s E. Hall 1 (177-ac), Levi Jordan sur, top Pecan chalk 2360 ft, cor shale 3820 ft. C. L. Simpson-McGinnis et al's P. M. Staggers 1, J. D. Nelson sur, Pecan chalk 2520-2955 ft, sd repairs 3820 ft.

NAVARRO COUNTY—Bennett Bros. et al's T. E. Stewart 1 (83-ac), W. R. Bowen sur, testing sand 1170-1186 ft. W. J. Keeling Estate et al's J. F. Rushing 1 (84-ac), Henry Ford sur, 6 mi w Currie, elev 530 ft, top broken

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Austin chalk 2155 ft; first hard chalk 2196 ft; dr 2250 ft. L. N. McCulloch et al's C. D. & J. L. Berry 1 (35-ac), W. W. Moss sur, sd 625 ft. R. L. Wheelock-J. L. Collins-Magnolia & Humble's I. N. Cerf 1 (147-ac), Jas. Smith sur, Trinity sand test on w edge Corsicana-Powell field, elev 435 ft, Austin chalk 2860-3372 ft; top Woodbine sand 3827 ft; top Georgetown lime 4307 ft; top Glenrose sand 5032 ft, dr soft lime 5310 ft.

RED RIVER COUNTY—Speary & Cornell's E. H. Thompson 1 (38-ac), Eliza Smith sur, logged lime 950-1010 ft; sd 1075 ft.

RAINS COUNTY—J. K. Wadley-J. W. Halsell et al's T. F. Jones 1 (22-ac), BBB&C Ry. sur, elev 425 ft, Pecan chalk 2503-2700 ft; top Austin chalk 3970 ft, sd in dry Woodbine sand 4732 ft.

RUSK COUNTY—Geo. F. Hudson et al's J. H. Phillips 1-A, N. Villareal sur, top Pecan chalk 2412 ft, top Woodbine sand 3616 ft, bailing cas 3673 ft. Head Water Oil Co.'s F. L. Gary 1 (200-ac), Jose A. Mora sur, Pine Hill area, rig. Stewart & Egan's Hall Wood 1 (847-ac), Blk. 12, Jose I. Sanchez sur, lcn.

UPSHUR COUNTY—G. H. O. Oil Co.'s J. M. Floyd 1 (177-ac), Robt. Raiford sur, dr 3310 ft. Lanier & Moore's Mrs. M. Vaughn 2, P. B. Stanifer sur, sd 1042 ft. Joe Papadakis et al's L. V. Towery 2 (4-ac), Wilson L. Parmer sur, dr 3000 ft.

VAN ZANDT COUNTY—B. F. Blackman et al's C. E. Dorrell 1 (35-ac), C. E. Rivers sur, dr shale 1465 ft. E. B. Evans et al's Mrs. P. J. Palmer 1 (140-ac), NCSL sur, lcn. W. E. Brown et al's First Nat'l Bank (Edgewood) 1, (100-ac), M. V. Lout sur, elev 515 ft, top Midway 850 ft, dr 2760 ft. H. L. Edwards et al's A. T. Bass 1 (16-ac), Wm. Hart sur, elev 480 ft, top Woodbine section 4210 ft, fsh 4267 ft. Martin & Evans' L. M. Palmer 1 (69-ac), Blk. 13, NCSL sur, co 1290 ft. Green & Wynn's A. L. Eaton 1, L. Smith sur, lcn. S. E. Miller et al's J. M. Palmer 1 (39.1-ac), Blk. 14, NCSL sur, sd 225 ft. Peden-Olson Oil Co.'s W. S. Brannon 3 (45-ac), sd 1227 ft; Palmer 1, sd 1270 ft. Skinner et al's D. F. Cade 1 (28-ac), NCSL sur, sd 1265 ft. Van Zandt Synd.'s Dr. C. S. Coker 1 (60-ac), Wm. Daniel sur, sd 1208 ft.

WOOD COUNTY—Alex M. Snyder et al's J. T. Holmes 1 (122-ac), A. N. McKnight sur A-399, Pecan chalk 3400-3700 ft, sd 4000 ft.

SOUTH TEXAS

BANDERA COUNTY—A. P. Crane & Co.'s Watson 1, Antonio Curvier sur, Sec. 71, dr 1560 ft. Peerless Oil & Gas Co.'s R. G. Garrison 1, Sec. 506, GC&SF sur, td 496 ft, sd for water, may lay line to Medina river.

BASTROP COUNTY—Champion Oil Co.'s Chares E. Anderson 1, J. A. Navarro sur, sd for water 791 ft.

BEE COUNTY—Bill Hindeman's Imogene Hall, to make lcn. Caeser Oil Co.'s Pullin Estate 2, F. Lewis sur, td 3038 ft, sand 3031-38 ft, dr out plugs. Falvey et al's Gardiner 1, F. Lewis sur, sd 3064 ft. R. H. Feltner's Albert Theis 1, Castano Revis sur, dr 4250 ft. H. I. Grimes et al's J. A. Allen 1, 660 ft nl and el of B. Odlem Sur. No. 18, lcn rept. Edwin M. Jones' Robinson 1, Sec. 5, Uranga Grant, ru. Walton & Heard's Rapp 1, sw se Sec. 5, Uranga Grant, td 3913 ft, sand 3906-13 ft, dst 500 ft oil, 90 lbs, 10 min, set csg, wocs. Weekly Oil Co.'s Laura E. Weiss 1, B&B sur, dr 100 ft. R. J. Worthington et al's Rutledge 1, B. Q. Hadley sur, re-dr 300 ft.

BEXAR COUNTY — Briggs & McPhee's Florence Lamb 1, M. de Luna Sur. No. 4, re-dr 825 ft; Randolph Carter, M. de Luna sur, prep to sp. James G. Bole's Dillon 1, M. de Luna sur, td 1404 ft, wait on heavier rig. F. T. Chew's C. S. Ogden & Brooks 1, Mission Irrigated Farms, td 250 ft, ru rotary to dd. F. & H. Oil Co.'s George W. Hendrichson 1, County Blk. 4191, td 1050 ft, prep to move on rig to dd. F. W. Noble's R. W. DeVilbliss 1, Martinez Sur. No. 36, dr 640 ft. Texas Petroleum Co.'s E. B. Carruth 1, F. Rolen Sur. No. 48, td 1183 ft, built up 460 lbs pressure closed in, looks like small gas well, some oil.

BROOKS COUNTY—Cole Petroleum Co. & Locke Purnell's G. D. Ullrich 1, 785 ft wl and 1323 ft sl of CCSD&RGNG Ry. Sur. No. 7, ru.

CALDWELL COUNTY—Francis P. Hynes' Coperland 1, 700 ft sl and 400 ft el of 301-acre tract, Esther Berry sur, ru. Kurz Oil Producing Co.'s C. Kurz 1, Klecamp sur, dr 1600 ft. Monte Vitas Oil Corp.'s W. I. Pope 1, McCarley sur, dr 1750 ft. Newton Oil Co.'s A. O. Mebane 1, F. Berry Sur. No. 12, co 1973 ft.

CALHOUN COUNTY — Continental Oil Co.'s American National Realty Co. 1, center ne Sec. 6, Blk. C, td 5870 ft, ds stuck, run over 8¼-in, circulating with oil about 400 ft in attempt to loosen, bad fishing job. Dyck Oil Co. and Mills Bennett Oil Corp.'s E. R. Adam 1, Sec. 45, Garcia sur, set 13⅜-inch sur csg, 1013 ft, dr ahead. Southwest Oil Corp.'s Welder Ranch 3, 373 ft nel and 1820 ft sel of J. M. Rios sur, 5000-acre tract, lcn.

De WITT COUNTY—Texas Co.'s Jess Midgett 1, start at se cor of lease, thence n 35 degrees west 1000 ft, and s 55 degrees west 900 ft, Sec. 14, dk.

DUVAL COUNTY—Continental Oil Co.'s R. Driscoll Estate 2-A, Sec. 448, dr 4340 ft. Graham and Texon Royalty Co.'s George B. Parr 1, 2000 ft nl and 2500 ft el of tract, J. Poitevent Sur. No. 185, sd 3636 ft, likely will abandon. Frank Gravis' Hubbard 1, Sec. 83, dr 2235 ft. Harrison Oil Co.'s Serna 2, Sec. 523, dr 1070 ft. Harver and Henderson's Serna 1, Sec. 384, 330 ft sl and el of s half of sec, lcn for 2750-foot test. W. W. Holland's Wood-Welder 1, Sec. 211, dr 600 ft. Jeffers' Oil Co.'s Cadena 1, J. M. Hinojosa Grant, prep to sp. Lewis and Beer's W. R. Peters 1, Blk. 18, Sec. 27, prep dst 2064 ft. Magnolia Petroleum Co.'s Duval Ranch 1, Sec. 58, dr 5360 ft. W. C. McBride, Inc.'s Hagist 1, Sec. 1, no rept. O'Byrne and Jennings' Benavides 1, Blk. 6, Sec. 355, dr 1545 ft, sand 1098-1100 ft, show gas. Sun Oil Co.'s Moreno 1, Sec. 574, prep dst sand 6354-59 ft. Texas Co.'s H. Beall 1, Sec. 571, 12 mi n San Diego, ru for 5000-foot test.

EDWARDS COUNTY — Will Ohlhausen's Turney 1-A, CCSD&RGNG Ry. sur, Blk. NW, Sec. 176, dr 215 ft. H. H. Sides' Turney 1, CCSD&RGNG Ry. Sur. No. 164, dr 1010 ft.

FRIO COUNTY — Amerada Petroleum Corp.'s Halff & Oppenheimer 2, H. Gobson Sur. No. 16, dr 6820 ft.

GILLESPIE COUNTY—Ed L. Nixon's Lindig 1, J. Guerra Sur. No. 41, dr about 350 ft, last rept.

GOLIAD COUNTY—Duval Oil Corp. and Fred K. Foster's Lucy Borden 1, A. Gutierrez sur, contract let for 4500-foot well, to start by 8/15/34. Diamond Half Oil Co.'s Runge Nat'l Bank 1, G. B. Myers sur, sd 3745 ft. Oceanic Petroleum Corp.'s Fromme 1, P. D. Dexter sur, td 2685 ft, move in rig over old hole, prep to dd.

GONZALES COUNTY — H. H. Weinert's August Kallies 1, Ira Nash sur, dk.

GUADALUPE COUNTY — Diamond Half Oil Co.'s A. J. Ball 1, L. H. Peters sur, dr 2060 ft. Hollifield et al's Schwarzlose 1, 200 ft nel and 900 ft nwl of 99.6-acre tract, J. A. Miller sur, ru. Texio Oil Co. and J. Elmer

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Thomas' Maurerman 1, J. de la Baume grant, dr water well.

HIDALGO COUNTY—Davis and Harrison's Mrs. L. George 1, Tr. 13, Por. 41, td 4136 ft, blew out when dst attempted, developed 1800 lbs. pressure, running csg. Union Sulphur Co.'s American Rio Grande Land and Irrigation Co. 2, set 1156 ft sur csg, dr 1160 ft. Woods et al's John Lawrence 1, Tract 274, Por. 39, dr 2100 ft.

JACKSON COUNTY — Phillips Petroleum Corp.'s Drummond 1, Musquiz grant, td 6012 ft, change to 4½ inch bit to dd; State Realty and Investment Co. 1, Vanderbilt townsite, dr 2400 ft; Simon and Seidel 1, Musquiz sur, td 6000 ft, ran electric formation test, showed sands below 5800 ft, setting csg at that level to test.

JIM HOGG COUNTY—Atkins & O'Neil's W. W. Jones 1, Share 27, Blk. 81, Diego Hinojosa Grant, coring 4310 ft. Sun Oil Co.'s M. Guerra & Sons 2-E, Share 14-A, Cuevitas Grant, coring below 2700 ft; A. Martinez Estate 1, Las Animas Grant, tract 25, dr 2000 ft.

JIM WELLS COUNTY—O. W. Killam's W. D. Wade 1, 100 ft nwl and 1400 ft nwl of Lot 1, Blk. C, Wade subdivision, lcn.

KARNES COUNTY—Abercrombie & Harrison's Schaeffer 1, A. W. Belvin sur, sd 1760 ft for rep.

KENDALL COUNTY — Walter Bradley's W. Werner 2, J. F. Torry sur, sd 695 ft.

KERR COUNTY—Edmiston and Walker's Whitworth 1, HE&WR Sur No. 1439, dr 675 ft, last rept. J. F. Morrisey Co., Inc's, F. A. Karger 1, BS&F Sur. No. 1, Abst. 77, td 310 ft, underream to lower 10 inch. G. F. Schreiner's Jeff Love 3, J. Martinez Sur. No. 1594, fsh 1670 ft. Vanmore Oil Co.'s Nowlin 1, J. R. Bettner sur, td 1040 ft, prep to move in rig to dd.

LEE COUNTY—James E. Pederson's C. A. Turner 1, D. Hudson sur, dr 5630 ft.

LIVE OAK COUNTY—Houston Oil Co.'s Cartwright 26, 1000 ft nw No. 25, set 491 ft 13⅜-in sur csg, wocs. Lion Oil Refining Co.'s McNiell 1, James Curry, sand 4370-76 ft, dst 300 ft oil 4 min, set csg.

McMULLEN COUNTY—Brasada Oil Co. (Don Long) Nueces Land and Livestock Co. 1, center sw Sec. 111, moving in rig. Circle W. Oil Co., making lcn southwest of Calliham. Choate & Noble's Miles 1, Sec. 76, lcn. Cooper, Fraten Co., Inc. et al's E. R. Hagist 1, 330 ft nl and el Sec. 125, prep to move on. C. C. Shumway, Inc.'s, Shiner Ranch 7, Sec. 62, top Cole sand 1059 ft, sand 1070-74 ft, show o and g, prep dst.

MEDINA COUNTY — Scoggins and Sanders' L. W. Burrell 1, M. E. Gage Sur. No. 395, dr 1520 ft.

MILAM COUNTY — McNeil Petroleum Co.'s W. C. Butler 1, 450 ft nwl and 1050 ft nwl of 100-ac tract, James Lewis sur, lcn.

NUECES COUNTY—Nutex Oil Co.'s King 1, Sec. 24, King Farm lots, td 6021 ft, pb 5455 ft, sd. Southwest Oil Corp.'s Poenisch 1, 990 ft wl and 660 ft nl of Sec. 32, Blk. 2, lcn. Stanolind O&G Co.'s Stratton 2, Sec. 13, Abajo Grant, dr 5890 ft. Texas Seaboard Oil Co.'s Jurica 1, Robertson Sur. No. 32, dr 5050 ft.

REAL COUNTY—M. J. Heartwell's Mrs. M. S. Perry 1, Sec. 175, AB&M Sur, td 2838 ft, mov in heavy rig.

REFUGIO COUNTY — Holland Oil Co.'s Peck 1, Sec. 24, E. Lopez Sur. No. 44, td 5351 ft, new td in sdtr hole 5348 ft, prep to swab. Looks like a gasser spraying distillate and will open new field. Quintana Petroleum Co. and Humble Oil & Refining Co.'s T. O'Conner 2-A, Blk. 4, Swisher sur, dr 2000 ft.

SAN PATRICIO COUNTY — Atkins & O'Neil and Continental Oil Co.'s E. Welder 2, Villareal sur, td 5383 ft, attempt to cut off water. Beasley & Maxwell's Saddler 1, Sec. 32, Perez sur, dr 5056 ft, last rept. Diamond Half Oil Co.'s Ragsdale 1, George A. Paul Sur. No. 58, td 5518 ft, pb 5470 ft, whipstock and sdtr. Heep Oil Corp.'s R. H. Welder 3, Loupy sur, coring 5495 ft, not looking too good. Marland Oil Co. of Texas' Mrs. Annie Miculastic 1, Sec. 6, B. Dale sur, sd 3015 ft, Petrol Corp.'s Welder 1, de la Garza sur, td 6000 ft, pb 5200 ft, sdtr and dr ahead to sand 5405-35 ft.

STARR COUNTY — Circle W. Oil Co.'s Block Bros. 1, Block 13, dr 4161 ft. Smith-Tex Oil Co.'s Starr County Cattle Co. 2, Blk. 37, Por. 89, dr 1800 ft. E. L. Younkins' Kelsey Bass 1, Blk. 19, Por. 87, dr 1460 ft.

UVALDE COUNTY—Humble Oil & Refining Co.'s R. L. Anderson 1, J. J. Guerra sur, td 2663 ft, dr 2230 ft sdtr hole. T. T. Word's K. S. Truelove 1-A, Elam sur, sd 875 ft; Quinn Braden 1, Sec. 185, dr abt 1000 ft.

VAL VERDE COUNTY—Southwestern Exploration Co.'s Fawcett 1, Blk. 1, Sec. 14, GC&SF sur, ru.

VICTORIA COUNTY—M. B. G. Oil Co.'s Prybil 1, R. Manchola Grant, td 2150 ft. Gulf Production Co.'s Keeran 5, M. de Leon sur, dr 5110 ft. Humble Oil & Refining Co.'s A. M. McFaddin 1, C. O. Edwards sur, sand 5384-92 ft, dst 1300 ft sw 15 min dr ahead. Nutex Oil Co.'s Zimmer 1, R. Manchola Grant, td 2209 ft, installing separator, flowing oil, casing pressure 765 lbs; tubing pressure 880 lbs. Plummer et al's Zimmer 1, R. Manchola Grant, sp. Texas Co.'s A. M. McFaddin 2, C. M. B. Hoyt sur, dr 4560 ft.

WEBB COUNTY—Cole Petroleum Co.'s R. Benavides 85, Sec. 1, Callaghan Homestead tracts, td 3422 ft, flow by heads, using gas jet; Benavides 86, 660 ft nw No. 85, lcn. Fidelity Exploration Co.'s R. Saldivar 1, J. V. Borrego Grant, Sec. 657, sdtr 1918 ft. H. & M. Oil Co.'s Slator 1, 150 ft sel and 614 ft swl of 160-acre blk, Borego Grant, Blk. 65, lcn. United Production Co.'s Bruni Estate 1, Blk. 42, Sec. 8, reinstate, deepened from 3417 ft to 3413 ft, flowing sw and oil.

WILLACY COUNTY—W. W. Silk's Santa Rosa 1, Blk. 130, Lot 16, dr 1165 ft.

WILLIAMSON COUNTY—J. W. Johnson & J. Ray's Oxford 1, Williams sur, sd 832 ft. Mann & Raez's Fritz Raez 1, 1600 ft sel and 500 ft nel 166-acre tract, J. Bevil sur, sp. G. L. Rowsey, Tr.'s Pumphrey 1, West sur, sd 950 ft; Sandahl 1, Tom Smith sur No. 24, 1550 ft swl and 1380 ft sel of sur, lcn. J. Morgan Russell's Nelson Estate 1, Justice sur, dr 210 ft.

ZAPATA COUNTY—Robert Allison's Mrs. E. T. Garza 1, Blk 5, Sec 13, dr 1320 ft. Danvers & Harrison Oil Corp.'s N. J. Vela 1, 686 ft nel and 300 ft nwl of Blk 7, Vela sub, Por 29, dr 675 ft. F. B. Delaney et al's Volpe 1, Blk 1, Delaney sub of Share 11, Por 33, dr 2042 ft. Merle Gunby et al's Alice D. Haynes 1, Blk 4, A. B. Haynes sub of Comitas and Villas Grants, dr 600 ft.

TEXAS GULF COAST

AUSTIN COUNTY—I. T. I. O. & Johnson Bros.' Wangler 1, A. Kuykendall sur, dr shale 1810 ft.

BRAZORIA COUNTY — Amerada Pet. Corp.'s Houston Farms Dev. Co. 1, L. G. Bachelder sur, dr shale 5080 ft. Gillock Pet. Corp.'s Truska 1, H&TB No. 7 sur, dr shale 1515 ft. Jack Clark's Speer 1, J. F. Pinckney sur, tearing down rig 5009 ft. Harrison & Abercrombie's Bernard River Land Co. 1, C. Breen sur, dr shale 2303 ft.

BURLESON COUNTY — Bear Pond Oil Co.'s Coulter 1, A. Kennon sur, dr sticky shale 1988 ft.

CHAMBERS COUNTY—Turnbull & Irwin's Sudindrof 1, H&TC No. 67 sur, dr shale 7080 ft.

COLORADO COUNTY—Quintana Oil Co.'s Olmstead 1, M. Batson sur, td 3869 ft.

FT. BEND COUNTY — W. H. Scheper's Bartosh 1, H&TC Sec. 52 sur, sd 912 ft. Vico Oil Co.'s Darst 1, E. Powell sur, digging water well. Wilkes et al's Norris 1, Geo. Teel sur, sd.

GALVESTON COUNTY — Humble O&R Co.'s Maco Stewart 1, J. Sellers Lge. abd 7881 ft.

GRIMES COUNTY—W. D. Roan et al's Kelly 1, U. Sanders sur, cor 2751 ft. J. Woodward's Hamilton 1, O. Hill sur, dr sandy shale 3275 ft.

HARDIN COUNTY — Wilcox O&G Co.'s Sternberg 1, G. Dorsey sur, sd 6018 ft.

HARRIS COUNTY—Foster et al's Johnson 1, CC&SF sur, lcn. General Crude Oil Co.'s Rorick Est. 1, J. C. Ogburn sur, dr shale and lime 5322 ft. Imperator Oil Co.'s Brooks 1, R. R. Vince sur, sd 300 ft. Loring Oil & Gas Co.'s Westmoreland Dev. Co. 1, J. M. Swisher sur, dr shale 6863 ft. Southland Oil Co.'s Galney 1, H&TC Sec. 4 sur, dr 6263 ft. Texas-New York Dev. Co.'s Ralston 1, J. W. Moody sur, sd 1538 ft.

JEFFERSON COUNTY — Magnolia Pet. Co.'s Trust 1, P. H. Bell sur, dr shale 2310 ft. Miramar Oil Corp.'s Tolidor 1, S. Morris sur, dr shale and lime 4015 ft. Sun Oil Co.'s Long 1, J. Blair sur, coring ahead below 8303 ft.

LIBERTY COUNTY—R. M. Bruner's Bell 1, H&TB No. 4 sur, lcn. Extension Oil Co.'s Lovett 1, P. P. Dever sur, dr shale 3019 ft. Liberty Independent Oil Co.'s Neal 1, S. Strong sur, shale 2495 ft.

MONTGOMERY COUNTY—Sayre Oil Co.'s Delta Land & Timber Co. 1, J. H. Truitt sur, dr 3658 ft. Shell Pet. Corp.'s Creighton 1, Mary Connor sur, dr 3740 ft.

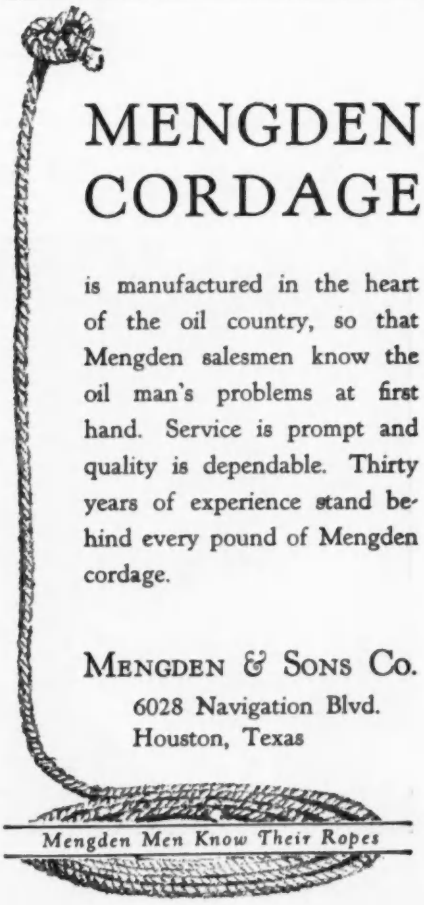
POLK COUNTY—Kirby Pet. Co.'s Kirby Lbr. Co. 2, J. Stephenson sur, mim.

TYLER COUNTY — Boone, Wallace and Lane's Crews 1, S. L. Graham sur, abd 3025 ft.

WHARTON COUNTY—Texas Gulf Prod. Co.'s Kresta 1, ETRR No. 151 sur, dr shale 4129 ft.

Mississippi Survey

Jackson, Miss.—A magnetometer survey has been completed by W. R. Julian of Shreveport on a block of approximately 30,000 acres assembled in Kemper and Noxubee counties, northeast Mississippi. This block was assembled by T. F. Jenkins of Longview, Texas. A tentative location for a test has been recommended in Section 36-13-19e. The block is in township 13 and ranges 18 and 19 east.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NEWS *from the* *Industry's* EQUIPMENT MAKERS

A.P.E.S.A. Elects New Officers and Additional Directors

J. A. Crawford, president of Republic Supply Company of California, Los Angeles, was elected president of the American Petroleum Equipment Suppliers' Association at the annual meeting of the association held at Broadmoor Hotel at Colorado Springs, Colorado, August 6 and 7. John A. Geismar, vice president and general manager of National Supply Company, Toledo, Ohio, was elected vice president. Wharton Weems, Houston, was re-elected executive secretary.

Three new directors were chosen as follows: Merle Boviard, Boviard Supply Company, Tulsa; Ed Gildart, Norvell-Wilder Supply Company, Beaumont, Texas, and Fred Murray, Oil Well Supply Company, Pittsburgh.

The association meeting was followed by a code authority meeting. The president and vice president of the association became automatically chairman and vice chairman of the code authority under the petroleum equipment code.

Mine Safety Appliances Company Opens Houston Store

Mine Safety Appliances Company, Pittsburgh, Pennsylvania, has established a warehouse branch at Houston, Texas, under the direction of George J. Gruber, its original representative in the Texas-Louisiana territory, and John B. Baird. The Houston warehouse carries an extensive stock of MSA Equipment, including masks, respirators, first aid materials, goggles, protective hats, safety shoes, inhalators, safety belts, etc. The new branch address is 2018 Capitol Street, Houston, Texas.

Atlas Supply Opens Two New Field Stores

Atlas Supply Company announces the opening of two new stores, one at Bushton, Kansas, in charge of Herschel Harder and one at Fairfax, Oklahoma, in charge of J. D. Lewis. Both stores will carry a complete line of oil field equipment, including pipe fittings and wire lines. Bushton is in the center of activities in Ellsworth, Rice and Barton counties. Fairfax is the point from which much of the activity in Osage County, Oklahoma, is being directed.

General Electric Meets Aruba Refinery Emergency

A 3000-mile aerial relay race against time from Schenectady, N. Y., to Aruba, an island in the Dutch West Indies, took place recently when an 808-pound shipment of electric-motor coils was rushed by plane from the General Electric Company's headquarters to Lago Oil and Transport Company, a refining and Transport Company, a refining concern owned by Standard Oil Company of New Jersey, and located about 50 miles north of the coast of Venezuela. The refinery, its motors crippled by flood, had been forced to shut down pending arrival of the new coils.

To meet the emergency, General Electric Company produced the coils —a type for which it was even necessary to manufacture the wire of which they were made—in three days' total time, although the work involved would ordinarily require from 2½ to three weeks. As soon as production was completed, the coils were packed in compact cartons, each weighing less than 100 pounds and specially designed for air shipment, and were flown by chartered plane to the Newark, N. J., airport.

There Standard Oil Company took over the shipment and placed it on an Eastern Air Lines' plane bound for Miami, Florida. Upon reaching the Miami airport, the cartons were transferred to Pan-American Airways for the journey across the Caribbean to Kingston, Jamaica, and thence to Barranquilla, Colombia. From that point the consignment was transshipped on a specially chartered plane to the island of Aruba, establishing what is undoubtedly a record for an emergency order of this kind.

The order for the coils, together with word of the refinery's predicament, reached General Electric Company on a Sunday morning. Three sets of coils for use on two 450-horsepower motors and one 100-horsepower motor, all of special design, were required. Work began immediately and continued, with the help of night shifts and other overtime expedients, until the plane loaded with the finished material roared southward from Schenectady.

New Officers of Suppliers' Association

J. A. CRAWFORD
Republic Supply Company of California

J. A. GEISMAR
The National Supply Company

New Equipment for the Field

Machinery....Tools....Catalogs....Books

▼ ▼ ▼

Swab

SHULL PERFORATING COMPANY

Shull Perforating Company, 2750 Cherry Avenue, Long Beach, California, has announced the new Shull swab, which, according to the manufacturer, incorporates advanced features in design that make it the most effective.

The swab incorporates expansion rubbers that may be adjusted to give any degree of expansion and wiping pressure desired, but without the complication of intricate parts. Its operation is extremely simple and performance records to date indicate long life and satisfactory swabbing of both casing and tubing, the manufacturer claims.

When running into the hole the two rubber assemblies are "up." They "ride" tandem-like, with the top assembly against the shoulder of the mandrel shank. The bottom nut, being off its seat when running in, permits free passage of the fluid along the channels of the mandrel stem, through the dual rubber assemblies.

When bottom is reached, the slidable rubber assemblies drop. The bottom nut of the lower assembly closes the fluid channels at the seat. Static load of the fluid column applies pressure to the swab rubbers from within. This fluid pressure is transmitted to the inner side of each rubber through a hole in the inner sleeves, thus expanding each rubber. This results in a clean wiping action against the wall of the casing.

Shull Swab

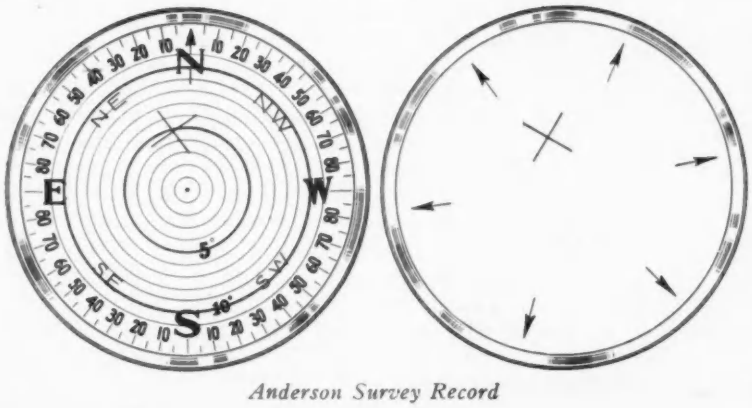
Survey Instrument

ALEXANDER ANDERSON, INC.

Alexander Anderson, Inc., Fullerton, California, has developed a new code disc which keeps in confidential form the readings of direction and inclination of drilling wells. It is designed for use with the Photo-Record Magnetic Single Shot survey instrument. The record discs provided by this instrument are developed on the derrick floor and since everybody on the rig is interested in the results of a survey, it was often embarrassing to the operator to have the records so readily read, as they are with the standard disc.

The code discs are designed to eliminate any possibility of rumors regarding the amount and direction in which a well is drifting from becoming circulated, according to the manufacturer. Such discs afford a means of securing confidential records that can be read only by those who are entitled to the information disclosed by the surveys. In the accompanying illustration are given two completed record discs. One is the regular 10° disc and the other is a 10° code disc. The reading as shown by the cross hairs is the same on both discs for both inclination and direction. No information is available from the code disc without the use of readers provided for this particular disc.

The code disc shows only the image of the plumb bob cross hairs and certain code marks around its edge; it is not preprinted with degree circles and does not present a photograph of the compass card. The inclination is read with a transparent circular reader provided with degree circles. The direction is obtained with another transparent reader which has code marks on it identical to the marks of the code compass card with which the survey instrument is equipped. This reader is graduated with compass bearings and when the code marks are adjusted to coincide with these on the record disc, the direction is read from a radial line passing through the intersection of the cross hairs.



Anderson Survey Record

Piston

LAMB PISTON SALES COMPANY

Lamb Piston Sales Company, Torrance, California, has announced the Lamb solid piston, which is hand built with a special rubber compound. The "lip" used in the piston wipes the liner clean, thus resisting abrasive action of sand cuttings in the fluid. A special fluid resisting compound is used for handling hot oils. The pistons are available for either taper or universal rods. Literature will be mailed upon request.

Electrode

LINCOLN ELECTRIC COMPANY

Lincoln Electric Company, Cleveland, Ohio, has announced "Fleetweld No. 7," a general purpose heavily coated electrode for welding with shielded arc on mild steel. Pronounced welding economies are effected by the new electrode, according to the manufacturer.

The new electrode was particularly designed for high speed and single pass welding. It has a high burn-off rate and low splatter loss, providing fast welding at low cost, it is claimed. The electrode has a tensile strength of 70,000 to 80,000 pounds per square inch, a yield point of 55,000 to 60,000 pounds per square inch, and ductility of about 20 percent. Its resistance to corrosion is claimed to be greater than that of mild steel.

The coating is of special composition material, the metal being drawn to rigid specifications. The new electrode is manufactured in the usual run of diam-

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Ball and Seat to work on a

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Built for severe service, the MONARCH is harder than other non-corrosive Balls and Seats—resists cutting action of sand—no ball breakage. At all good supply stores.

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eters, and in 14-inch lengths. The ⅛-, 5/32-, and 3/16-inch sizes are designed for welding in flat, vertical or overhead positions, and the larger sizes for welding in flat positions only.

Gate Valve

KENNEDY VALVE MANUFACTURING COMPANY

Kennedy Valve Manufacturing Company, Elmira, New York, has placed on the market a new heavy standard bronze gate valve designed for 150-pound working steam pressure, and 250-pound working water, oil or gas pressure. One of the outstanding features of these new valves is the large bonnet hex which is placed close to the body to make the entire valve more rigid, and also to assist easier removal of the bonnet and stem assembly when the valve is installed with close clearances.

Transactions A.I.M.E. (1934) 107

Petroleum Development and Technology. Clothbound volume, 465 pages, price $5. American Institute of Mining and Metallurgical Engineers, 29 West 39th Street, New York, N. Y.

This book, recently off the press, contains papers presented before the division at Los Angeles in September, 1933, at Dallas in October, 1933, and at New York in February, 1934.

The papers are divided into five chapters, covering production engineering and engineering research, petroleum economics, stabilization data, production statistics on domestic and foreign fields, and developments in refinery engineering during 1933.

The chapter containing statistical information on production is worthy of particular mention, as it presents the statistics in a new and more comprehensive form than previous publications of the organization.

Another new feature of the volume is a table showing the consumption of petroleum throughout the world in 1931, 1932, and 1933, included in the chapter on petroleum economics.

The volume represents a valuable and authoritative compilation of engineering and statistical data on petroleum, appealing to engineers, economists, geologists, executives, and manufacturers.

The Accounts of an Oil Company

By H. G. Humphreys. Cloth bound volume, 136 pages, price $2. Published by American Institute Publishing Company, Inc., 135 Cedar Street, New York, N. Y. For sale by Gulf Publishing Company, Houston, Texas.

This book was selected by the committee on publication of the American Institute of Accountants as one of its principal titles for this year. It was published through recognition that great changes have taken place in the methods of producing and refining oil and that there have been accompanying changes in the methods of accounting.

Some of the material was published during 1933 in *The Journal of Accountancy* in the form of series of articles on various phases of the petroleum industry. Those articles have been amplified and much new matter has been added.

The book is divided into eight chapters, taking up in sequence the following subjects: balance sheet and general accounts, departmental investment and income, forecast of income, oil and gas properties, natural gasoline department, refinery department, lubricating department, and marketing department.

Squeaks *from the* BULL WHEEL

"I have an old polar bear rug, a little worn at one end, but otherwise quite good. What shall I do with it?"

Answer—"These are depression days. How about putting a button on it and wearing it for a fur coat?"

The schoolmistress was giving her class of young pupils a test on a recent natural history lesson.

"Now, Sandy McDorr," she said, "tell me where the elephant is found."

The boy hesitated for a moment; then his face lighted up. "The elephant, teacher," he said, "is such a large animal it is scarcely ever lost."

Lady (to window cleaner)—will you have a cup of tea or a glass of beer?

Window Cleaner—Beer's best, mum, I allus finds it gives a better polish when I breathe on the glass.

"Mamma, was that policeman ever a little baby?"

"Why, yes, of course."

"Oh, mummy, I should so love to see a baby policeman."

Curate (to unfailing supporter): Oh, Mrs. Tootsby, it wouldn't seem to be a rummage sale without you here.

"What do you intend doing when you come out of prison?"

"If I tell you, chaplain, promise me you won't let on."

He: Do you smoke?
She: No, I don't smoke.
He: Do you drink?
She: No, I don't drink.
He: Do you neck?
She: No, I don't neck.
He: Well, what do you do?
She: I tell lies.

Conductor Haney—She seemed like a good sensible girl.

Brakeman Henry—Yeh, she wouldn't pay attention to me either.

The inebriated young man rocked into the lobby of a great hotel far from his native land. He looked into a tall mirror and smiled with pleasure.

"Look!" he cried. "They've got a picture of me here!"

She—Now what are you stopping for?

He—I've lost my bearings.

She—Well, at least you are original. Most fellows run out of gas.

And, now, boys and girls, we see that nothing is impossible.

It isn't, eh? Well, I'd like to see you stick an umbrella down your throat and then open it.

It was pouring. Two men who had quarreled went out in the rain to settle their differences. They fought until one got the other on his back and held him there.

"Will you give up?" he asked, and the reply was "No."

After a time the question was repeated, but again the reply was "No."

"Then," said the other, "will you get on top for a while and let me get under? I'm getting all wet."

Every time I look at you I think of a great man.

You flatter me. Who is it?

Darwin.

"Why, hello, Jimmy, I hear you lost your job in the department store."

"Oh, yes, I got fired."

"You got fired? How did that happen?"

"Oh, I just took a sign from a lady's shirt waist and put it on a bath tub."

"And you got fired for that? Well tell me what the sign read."

"It said, 'How would you like to see your best girl in this for $2.75?'"

"James," said the wife to her husband, "how do you like my new hat?"

"Well, my dear," said James, with great candor, "to tell you the truth—"

"Stop right there, James," said she. "If you're going to talk that way about it I don't want to know."

Two colored brethren were bewailing the hard times. "Boy," said one of them, "times is harder'n I ever seen 'em before. If sumpin' don't turn up perty soon I'm gonna start preachin'. I done that oncet an' I ain't too good to do it ag'in."

"My dear, what a lovely coat. What did it cost?"

"Just one single kiss."

"That you gave your husband?"

"No. That he gave our new maid."

Would you marry a woman who is a great talker, or the other kind, Ezry?

What other kind?

A visitor to the office of a big firm was struck by the lazy movements of a member of the staff, who seemed all the same to be on good terms with the others.

"How long has that man worked for you?" he asked the manager.

"About four hours, I should say."

"Indeed! I should have judged from his manner that he had been here longer than that."

"He has," said the manager. "He's been here about two years."

Before I can engage you, you will have to pass an intelligence test.

Intelligence test? Why, the advertisement said you wanted a stenographer.

A Pound of Protection

is worth a Ton of "Bum" Drill Bits

Drillers used to say this container held a pound of good luck . . . . now they call it a pound of good business . . . . and the boss agrees with them.

DIAMOND METAL cuts not only *tough formation* . . . . it cuts high drilling costs.

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FOR SALE
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GOOD SECTIONAL BAILERS
KILGORE—4¼"x50′ 3-section .....$ 40.00
5" x50′ 3-section .....$ 49.00
5½"x60′ 3-section .....$ 60.00
HOUSTON—7" x91′ 4-section $110.00

CABLE TOOL BITS—Extra good set of 6⅝-in., Hinderliter Drilling Bits, 7 feet, 7 inches long at attractive price f.o.b. Pampa. Set of 6⅝-in. Bridgeport Bits 7½ feet long at Kilgore. Many other good used bits of practically all sizes at various points. Our prices on used bits are very low.

TRAVELING BLOCK—Good 66-in., 4-sheave Johnson Timken Roller Bearing Traveling Block with guards. First class condition in all respects. Houston stock.

OIL BURNERS—(2) Garden Automatically Regulated Oil Burners. Practically new and guaranteed to operate the same as new burners. Suitable for any size boiler. On many jobs these burners have saved as much as 1/3 the fuel cost. Price $50.00 each, f.o.b. nearest Bridgeport Store.

NEW CHAIN—Very attractive price on a few reels of Baldwin Calf Wheel Chain which is being closed out of McPherson Stock. Can be shipped anywhere.

CASING CLAMPS—Practically all sizes of good used Casing Clamps at most stores. These are clamps secured from salvaged properties and the price is very reasonable.

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Advertisers' Index

Abercrombie Pump Co. .....
American Askania Corp. 48
American Association of Petroleum Geologists .....
American Cable Co. .....
American Iron & Machine Works.....
American Petroleum Institute 22-23
American Roller Bearing Co..... 64
American Steel & Wire Co.....
Apex Construction Co. .....
B. K. Appleman 63
Authorized Appleman Bit Service.....
Axelson Manufacturing Co. .....

Baash-Ross Tool Co. .....
Baldwin-Duckworth Chain Corp. 70
Baker Oil Tools, Inc. 11
Baroid Sales Co. .....
The Barrett Co. 43
William M. Barret, Inc. 76
Bowen Air Lines .....
Bradford Motor Works 80
Brauer Machine & Supply Co.....
Breckenridge Chemical Co. .....
The Brewster Co. .....
Bridgeport Machine Co...Back Cover and 82
Broderick & Bascom Rope Co.....
Buck & Stoddard, Inc. 64
Burlington-Rock Island Railroad.....
Butler Manufacturing Co. .....
A. M. Byers Co. .....
Byron Jackson Co. .....

Cameron Iron Works 61
Caterpillar Tractor Co. .....
The Cavins Company .....
Chain Belt Co. .....
Chemical Process Corp. .....
Climax Engineering Co. .....
Coastal Oil Finding Co. .....
Cockburn Oil Corp. .....
Columbian Steel Tank Co. .....
Continental National Bank .....
Continental Supply Co. .....
Fred E. Cooper Co. .....
Cooper-Bessemer Corp. .....
The Corbett Corp. .....
W. H. Curtin & Co. .....
Darling Valve & Mfg. Co.....
Dayton Rubber Mfg. Co.....
C. L. Decker .....
Detroit Graphite Co. .....
Alexander Deussen .....
Diadem Oil Co. .....
Diamond Metal Co. 81
H. John Eastman 65
Geo. H. Echols .....
Elliott Core Drilling Co. .....
Emsco Derrick & Equipment Co.....
Emsco-Falk .....

Fairbanks Morse Co. .....
Fenwick-Reddaway Manufacturing Co...
First National Bank in Houston.....
Ford Motor Co. 47
Fort Worth Laboratories 76
Franklin Valveless Engine Co.....
Frick-Reid Supply Corp. .....

The Garlock Packing Co.....
Gas Lift Engineering Co.....
Gaso Pump & Burner Mfg. Co.....
Gearench Manufacturing Co. .....
General Electric Co. .....
H. P. Gott Manufacturing Co. .....
B. F. Goodrich Rubber Co.....
Gray Tool Co. 66
Gray Kerotest .....
The Guiberson Corp. .....
Gulf Publishing Co. .....18 and 48
Gulf States Utilities Co.....

Halliburton Oil Well Cementing Co.... 16
Hardway & Cathey 76
Haynes Stellite Co. .....
Hazard Wire Rope Co.....
C. M. Heeter & Sons Co.....
Hirsch, Susman & Westheimer 76
Houston Lighting & Power Co. .....
Houston Oil Field Material Co.....
Houston Ready-Cut House Co.....
Hughes Tool Co. .....Front Cover
Humble Oil & Refining Co. 80
Hyatt Roller Bearing Co. 45

Independent Exploration Co. 76
Ingersoll-Rand Co. .....
International Cement Corp. .....
International Derrick & Equipment Co..
International Harvester Co. .....
International Nickel Co. 46

Byron Jackson Co. .....
Jarecki Manufacturing Co. .....
W. P. Jenny 76
Jensen Brothers Manufacturing Co. ....
S. M. Jones Co. .....
Jones & Laughlin Steel Corp. .....

Kobe, Inc. .....
Kerotest Manufacturing Co. 50
Lacy Co. .....
Larkin Packer Co. 12
Layne & Bowler Co. .....
The Lyne-Wells Co. .....
Lenox Hotel .....
Link Belt Co. .....
Ludlow Valve Manufacturing Co. .....
Lufkin Foundry & Machine Co.....

MacClatchie Manufacturing Co. 67
J. F. Mahoney .....
D. S. Mair Machinery Corp.....
Maloney Tank Mfg. Co.....
Martin-Decker Corp. .....
F. G. Masquelette & Co.....
J. H. McEvoy & Co. .....
Mengden & Sons Co..... 77
Geo. S. Mepham Co. .....
Merchants Photo Service .....
Merco Nordstrom Valve Co.....
Mid-Continent Supply Co. .....
Miller Sand Pump Co.....
Mission Manufacturing Co. .....
Lee C. Moore & Co. .....
Muskogee Iron Works .....

National Bank of Commerce.....
National Bank of Tulsa.....
The National Supply Co. 41
National Tube Co. .....
Norvell-Wilder Supply Co. 29

Oil Center Tool Co. .....
The Oil Well Improvements Co.....
Oklahoma Gas & Electric Co.....
Operation Engineers, Inc. 76
Osage Metal Co. .....
Oster-Williams 62

The Parkersburg Rig & Reel Co.....
.....Third Cover
Patterson-Ballagh Corp. .....
Pelican Well Tool & Supply Co.....
Pennsylvania Shipyards, Inc. .....
Petroleum Equipment Co. .....
Petroleum Iron Works .....
Petroleum Rectifying Co. .....
Pittsburgh Equitable Meter Co.....
Pittsburgh Steel Co. .....
Portable Rig Co. .....
Price-Trawick, Inc. .....

Rector Well Equipment Co. .....
Reed Roller Bit Co.....
Regan Forge & Engineering Co.....
Republic Portland Cement Co.....
Republic Steel Corp. .....
The Republic Rubber Co.....Second Cover
Rex Supply Co. .....
Ridge Tool Co. 32
L. L. Ridgeway Co..... 76

Scandanavia Belting Co. .....
Second National Bank .....
Seismic Exploration, Inc. .....
Separafine Chemical Sales Co.....
Shaffer Tool Works .....
Shell Union Oil Corp. 34
Sinclair Refining Co. .....
SKF Industries, Inc. .....
South Chester Tube Co. 4
Southern Pacific Lines 44
Southern States Co. .....
Howard Smith Co. .....
E. M. Smith Co.....
Sperry-Sun Well Surveying Co.....
Starke Oil Corp. .....
State Bit Co. .....
Jesse R. Stone and Lester B. Clark.... 76

The Texas Co. .....
Texas Electric Service Co. .....
Texas Iron Works .....
Texas Rubber & Specialty Corp. .....
Texas Power & Light Co.....
Edgar Tobin Aerial Surveys..... 76
Toledo Pipe Threading Machine Co.... 71
Torsion Balance Exploration Co.....
Tretolite Co. .....
Tulsa Oil Thief Co. .....
Twin Disc Clutch Co. .....

United States Rubber Co.....
Union Carbide & Carbon Corp. .....
Union Wire Rope Co. .....
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John F. Weinzierl .....
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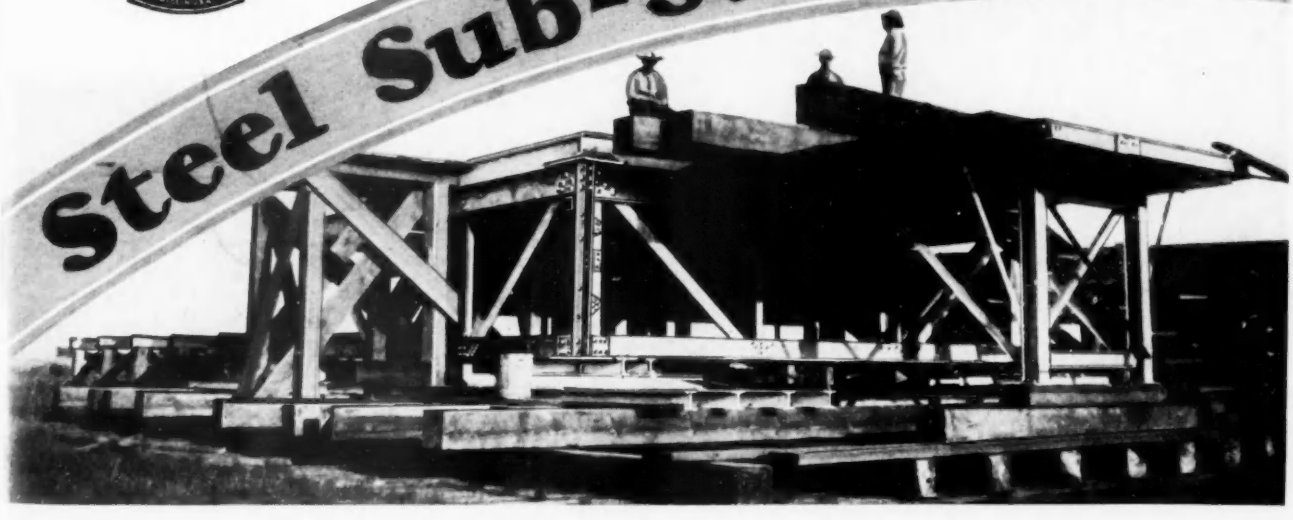

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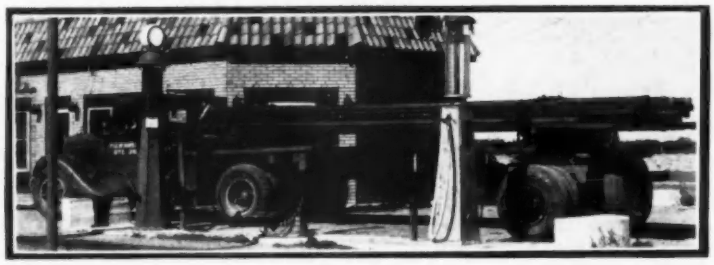

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